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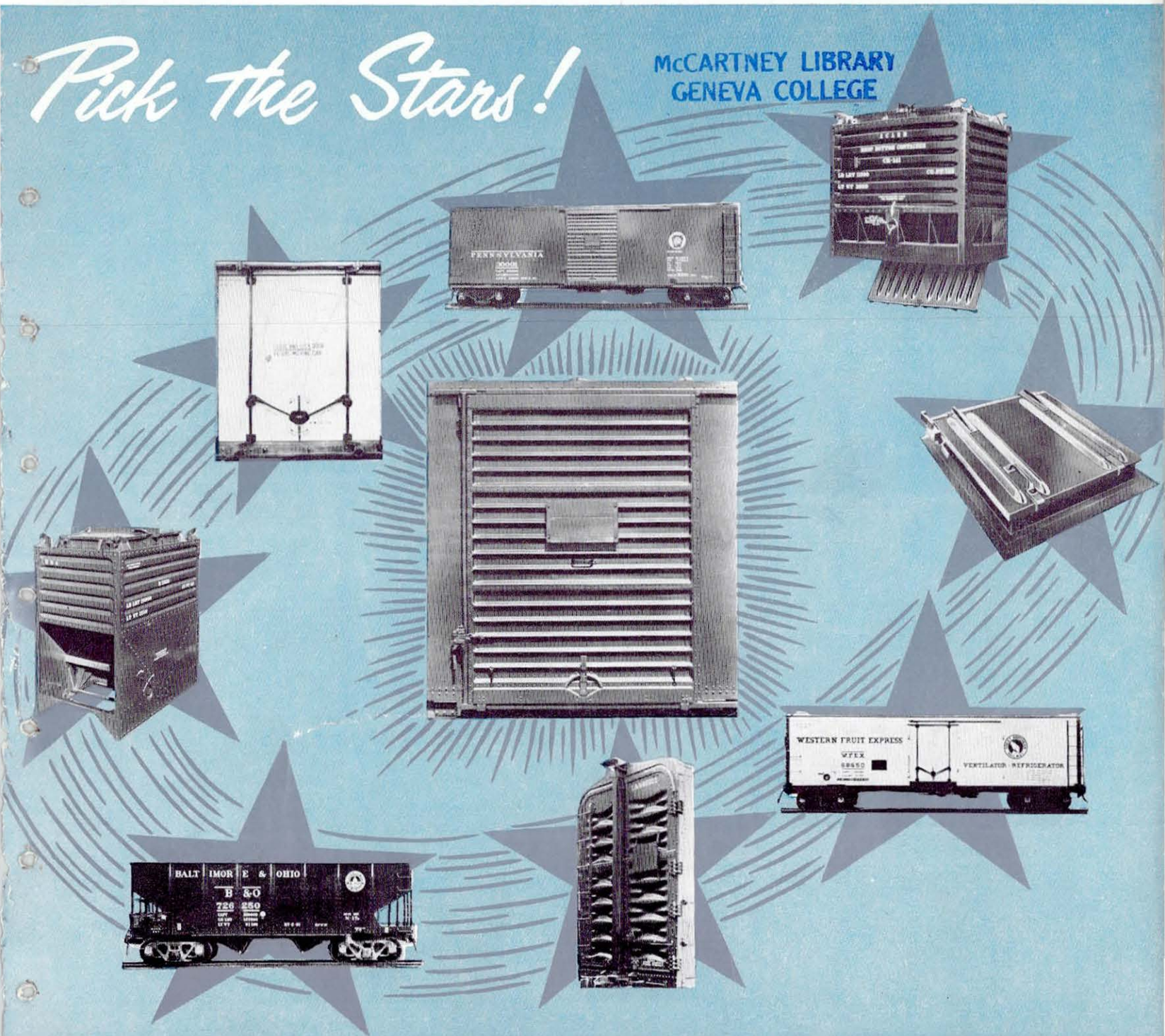

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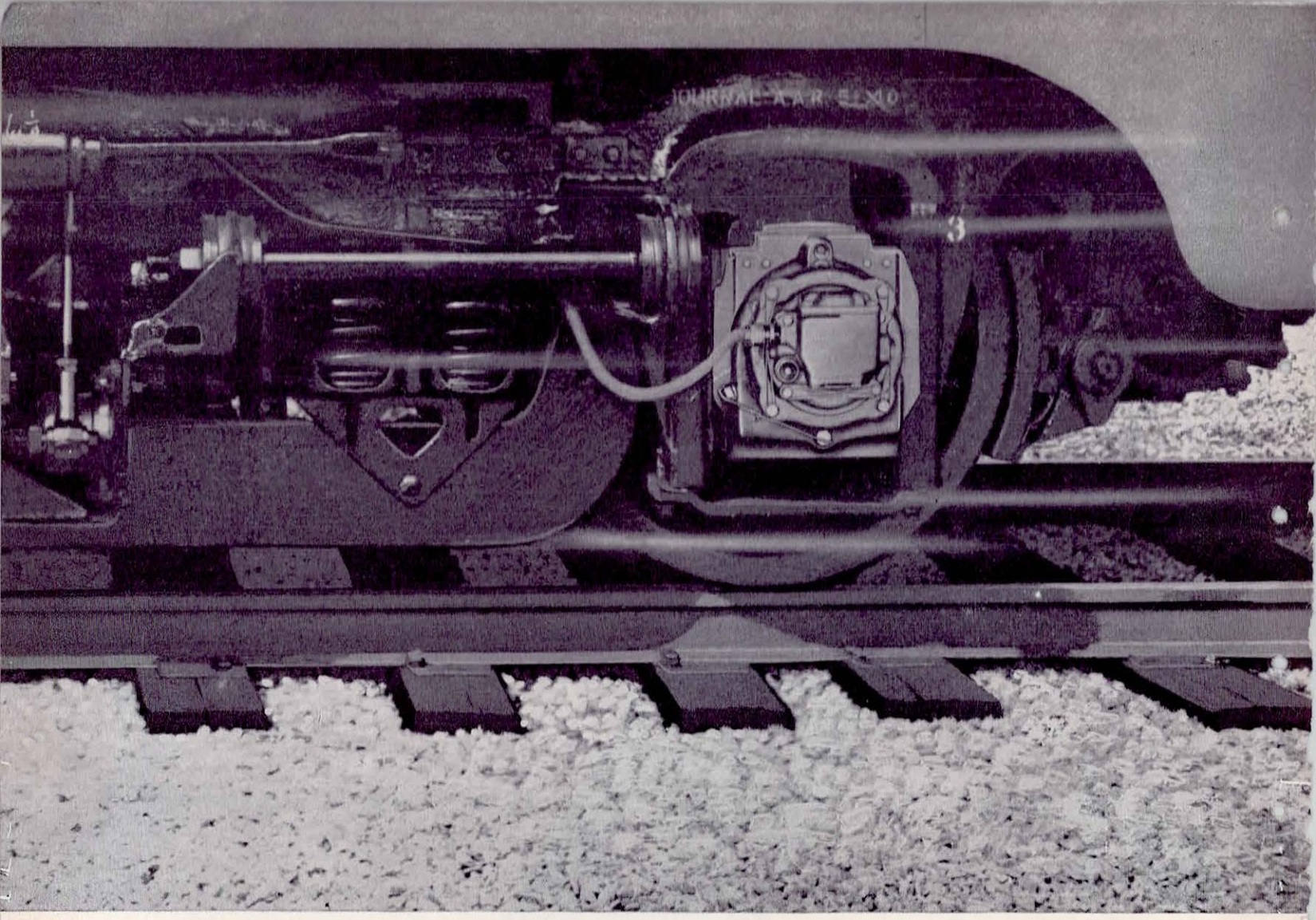

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IN THIS ISSUE

EDITORIAL COMMENT:

Railroad Viewpoint Impresses State Regulators 39
Product Specialists for the Traffic Department 40

FEATURE ARTICLES:

The "Train Master" 41
C.T.C. Adapted to Volume of Traffic—Present and Future 45
Diesels Take Over Another Steam Facility 48
Personalized Timetables Build Sales 52
The Gas Turbine as Railroad Motive Power 54

NEWS FEATURES:

No Substitute for Personal Passenger Selling, Traffic Heads Insist 11
Railroads Handled 7.88 Per Cent of Last Year's Passenger Traffic 12
Unit Tie Costs Up 127.7 Per Cent Since '41; Rails Up 95.4 Per Cent .. 12

DEPARTMENTS:

New and Improved Products .. 35
Current Publications 36
Benchmarks and Yardsticks .. 37
News of the Railroad World .. 11, 56
Organizations 56
Supply Trade 56
Overseas 56
Construction 58
Financial 58
Equipment and Supplies 58
Railway Officers 65

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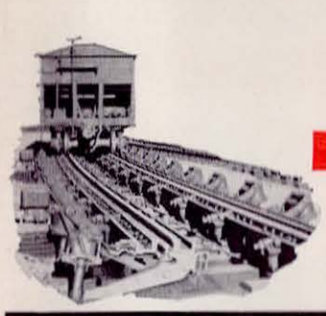
A PUSH-BUTTON EQUATION FOR EFFICIENCY



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WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, nine months	
1952	$7,753,138,898
1951	7,620,559,529
Operating expenses, nine months	
1952	$5,972,924,562
1951	6,003,270,343
Taxes, nine months	
1952	$ 912,274,900
1951	859,620,840
Net railway operating income, nine months	
1952	$ 732,335,415
1951	606,459,584
Net income, estimated, nine months	
1952	$ 502,000,000
1951	391,000,000
Average price railroad stocks	
November 18, 1952	63.14
November 20, 1951	53.18
Car loadings, revenue freight	
45 weeks, 1952	33,002,176
45 weeks, 1951	35,451,607
Average daily freight car surplus	
November 15, 1952	3,459
November 17, 1951	3,123
Average daily freight car shortage	
November 15, 1952	7,183
November 17, 1951	6,456
Freight cars delivered	
October 1952	5,437
October 1951	10,082
Freight cars on order	
November 1, 1952	90,708
November 1, 1951	132,792
Freight cars held for repairs	
October 1, 1952	104,283
October 1, 1951	97,176
Average number of railroad employees	
Mid-October 1952	1,248,178
Mid-October 1951	1,271,168

In This Issue . . .

THE NEWEST DESIGN of diesel-electric locomotive is the Fairbanks-Morse "Train Master." The 2,400-hp., six-motor, six-axle unit, which can be equipped for use in passenger, freight or switching service, is the subject of this issue's first feature article, beginning on page 41.

DIVORCING FREIGHT SERVICE MATTERS from jurisdiction of the freight traffic sales organization, the Soo Line has created an entirely new division of its freight traffic department—a freight service division. The object: Close, full time supervision of matters affecting customer satisfaction, such as car supply, tracing, diversion, etc. Details are given in the Railway Officers news section, under "Traffic."

BUT THE PRESENT SUPREMACY of the diesel as a railroad prime mover—emphasized by the description of the "Train Master" and by the page 48 article describing the Rock Island conversion of a steam shop for diesel repairs—may be threatened within the comparatively near future by the gas turbine. Officers of the Westinghouse Electric Corporation, at least, feel that the gas turbine is a suitable prime mover for locomotive service. This conclusion, based on two years and 50,000 miles of experience with the Westinghouse-Baldwin experimental gas turbine unit, is outlined in an article reporting a speech by J. K. Hodnette, starting on page 54.

"PERSONAL SELLING" is a very necessary but very much neglected aspect of the railroads' passenger business, the American Association of Railroad Ticket Agents was told in the course of its recent annual meeting at Miami Beach. Some of the existing defects in the railroads' selling system, and some suggested remedies therefor, as outlined by F. H. Baird and E. E. Gordon, are included in our news account of the meeting.

In Washington . . .

SOME NOT PARTICULARLY ENCOURAGING figures on railroad traffic and costs were included in the latest issue of the "Monthly Comment" of the I.C.C.'s Bureau of Transport Economics and Statistics. As covered in various articles in the news section, they show: (a) that freight tonnage handled by railroads in the first half of 1952 decreased, as compared with the first half of 1951, by a larger pro-

WEEK AT A GLANCE

portion than did the tonnage handled in the same periods by motor trucks; (b) that the railroads' share of all intercity passenger-miles in 1951 was less than their 1950 share, despite an increase in the railroads' total passenger traffic between the two years; and (c) that unit costs of ties and of rails have increased by 128 per cent and 95 per cent, respectively, in the past 10 years. These increases, far greater in proportion than increases in railroad rates, go a long way to point up why rate increases have been necessary.

I. C. C. LEADERSHIP in formulation of transportation policy, rather than regulation on a "case by case basis," has been suggested by Commissioner Anthony F. Arpaia as a means of overcoming the "dissatisfaction" with the commission's present activities. Some of the reasons behind Mr. Arpaia's proposal are set out in the news account of his address.

. . . And Elsewhere

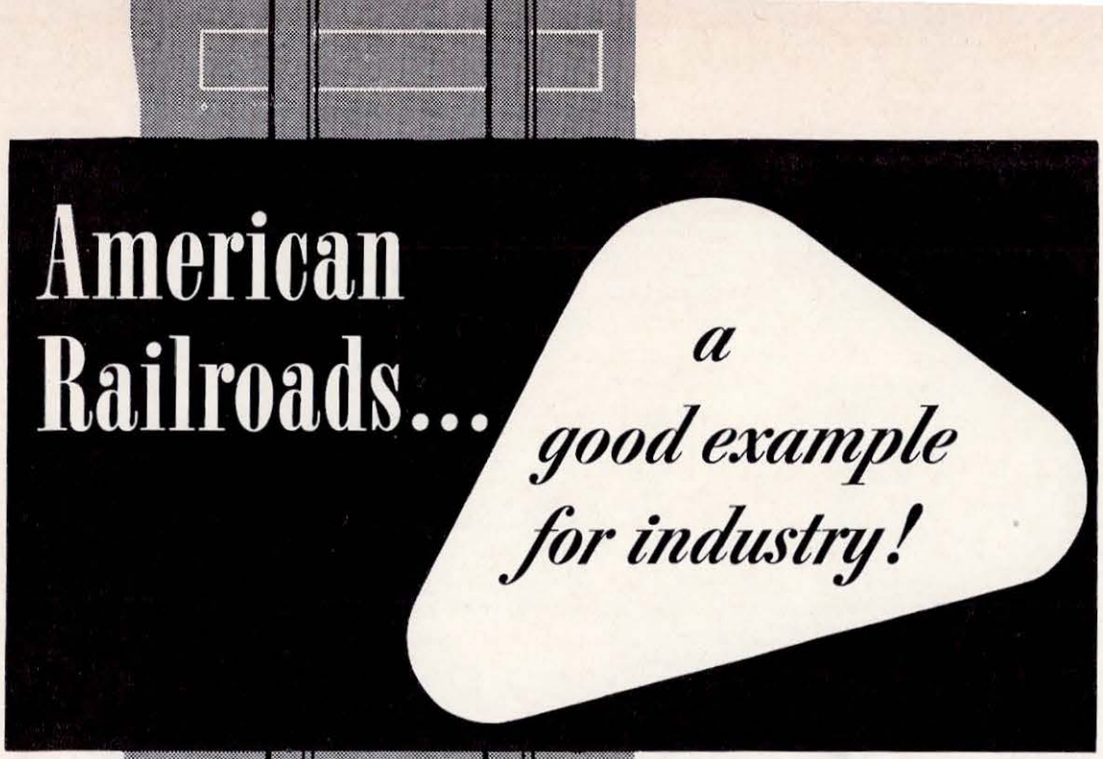
THE TRUCKING INDUSTRY is working toward standardized 35-ft. highway semi-trailers which can be interchanged between different types of tractors: Behind this move for standardization is an increasing amount of through trailer interchange service between trucking companies. So far this is taking place only on a contract basis, and rarely involves movement over more than two lines. Unlike railroad freight cars, interchange trailers, under most contracts currently in force, must be returned to the owning line as quickly as possible, though preferably under load. Recently one large midwestern truck line started actively soliciting interchange trailer movements from connecting lines. The trucking industry looks upon this development as a method of reducing cost and improving service on interline hauls.

"RAILROADS MUST BE permitted to operate in accordance with principles of the American private enterprise system," Fairman R. Dick (above), prominent railroad economist, said on November 19 in New York City. Addressing a group of the nation's leading shippers and railroad executives at the "Second Railroad Economics Dinner," Mr. Dick added that "once railroads join the private enterprise system the efficient ones will . . . attract all the money required to give the public the maximum quality of service at the lowest cost."

THE THIRD NATIONAL JAMBOREE of the Boy Scouts of America will be held at Irvine Ranch, Newport Harbor, Cal., July 17-23, 1953. Scout executives estimate that, of the 50,000 boys and leaders expected to attend from all sections of the country, 80 per cent will travel by train. The occasion would appear to offer a real opportunity for the railroads to cooperate in one of the country's most worthwhile youth undertakings and at the same time tell the dramatic story of railroad development and its importance as a private enterprise to America today.

"THE MOST SIGNIFICANT RATIO in railroading today is that of that portion of the total payroll which is chargeable to operations, to the total of operating revenues."—*From an address to the New York Society of Security Analysts, by William R. Coe, vice-president and treasurer of the Virginian.*

BY 1960, according to Vice-Admiral Emory S. Land, president of the Air Transport Association, United States scheduled airlines should carry more than 45 million passengers over domestic and international routes—an increase of 84 per cent over 1951. Admiral Land predicts the advent of jet aircraft in U. S. overseas operation by late 1957 or early 1958, but does not expect jet transport to "'exert a strong influence on the domestic rail-air travel market" before 1960.



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(This message appeared in the Wall Street Journal.)

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issue of the Wichita (Kan.) Beacon. It was signed by the senator and it expressed views in favor of the Rio Grande position in the case.

After noting that the examiner's proposed report "will result, if adopted by the commission, in a complete victory for the Rio Grande," Senator Johnson had this to say: "I firmly believe that the opening of the Ogden Gateway would benefit not only the shippers and receivers of freight in Kansas and Colorado, but throughout the nation as well."

UP President Stoddard sent photostatic copies of the "editorial" to all members of the commission along with copies of a November 3 letter which he addressed to Chairman Alldredge. In the latter's absence, the matter was handled by Acting Chairman Lee.

Mr. Stoddard, as he put it, had "no doubt" that the "Rio Grande people" would call the Johnson statement to the attention of the commissioners "in the hope of influencing . . . their decision by demonstrating that the senator "is still 'riding herd' on this case and that he anticipates that the loss of the through routes and joint rates by the Rio Grande 40 to 46 years ago 'may shortly be retrieved.'"

The UP president also recalled that Senator Johnson made like statements in radio addresses which he delivered in January and February of 1951, and which the UP promptly called to the commission's attention. Mr. Stoddard went on to "wonder" if the senator "is investigating and attempting off the record to intermeddle" in other pending cases "that are of interest to the people of Colorado and Kansas and other states."

Mr. Stoddard also said that he was sending his letter and "the so-called 'editorial'" to each of the commissioners "in order that all of you may know that we are fully aware of this latest effort to exert upon the commissioners whatever influence his strategic position as chairman of the Senate committee on interstate and foreign commerce may have.

Acting Chairman Lee's letter acknowledged receipt of the Stoddard letter and the copy of the "editorial." It went on to cite commission orders of March 12, 1951, and June 4, 1951, which denied a UP petition for reopening of the Ogden case record for the purpose of inserting transcripts of the radio addresses by Senator Johnson.

"This action," Mr. Lee continued, "clearly showed that this commission will not consider matters outside of the record in passing upon the issues presented to it for determination. It is, therefore, obvious that the editorial referred to can have no part in connection with the commission's consideration of . . . the record now before the commission."

I.C.C.'s Arpaia Wants Commission Leadership on Transport Policy

Reorganization of the Interstate Commerce Commission so that it may take the initiative in formulating transportation policy, instead of trying to regulate on a case-by-case basis, was suggested by Commissioner Anthony F. Arpaia in a November 12 speech in Washington, D.C.

Addressing the Washington chapter of I.C.C. practitioners, Mr. Arpaia said the "real source of trouble" with the commission is that it has developed "too much along judicial lines and not enough along administrative lines."

There is nothing wrong with the commission that "intelligent reorganization, the application of real administrative principles and money enough to do the job won't cure," he said.

The commissioner cited the I.C.C. chairmanship as an example of "administrative monstrosity." Out of 11 men of equal power one is elected "front man" each year. Calling him a chairman, Mr. Arpaia said, is "sheer euphemism." It is an "honor" which in reality is "an invitation to frustration."

The Transportation Act of 1940 established new policy on competitive transportation and imposed upon the I.C.C. an "entirely different type of burden," the commissioner said. The act recognized that the era of monopoly was over, that each type of transportation has a place, with the advantages in each to be preserved.

The commission was not operationally and structurally organized to meet this burden, nor was the transportation industry fully prepared to accept it, Mr. Arpaia continued. Failure to appreciate this has led to the dissatisfaction and ferment since 1940, he said.

"A diffuse organization without a responsible head can never serve an administrative purpose," he added. "An administrative agency with a job to do is quite different from a court. The court waits until a controversy arises and is brought before it; then it decides who is right and who is wrong and stops there."

Passage of the 1940 act rendered inadequate the quasi-judiciary adversary type of proceeding before the I.C.C., and made it no longer feasible to wait for matters to be brought to the commission, Mr. Arpaia said. "It was necessary to take the initiative, to guide the industry and to declare policy," he declared.

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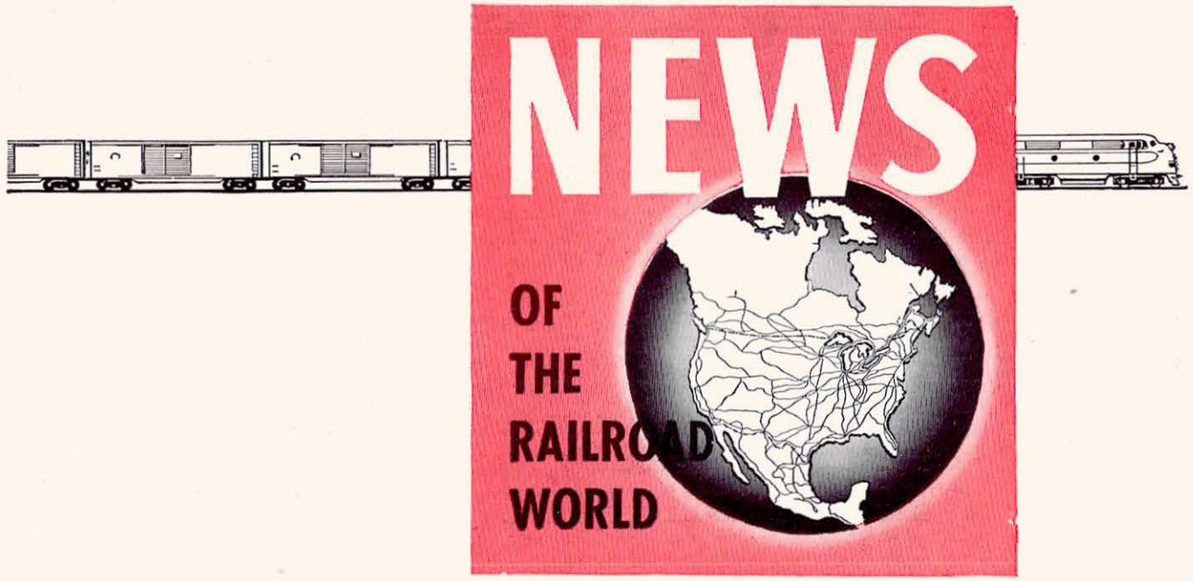

No Substitute for Personal Passenger Selling, Traffic Heads Insist

That there is something seriously wrong with the way railroads are selling passenger service, and that retail selling still demands the personal effort of the ticket agent, were the contentions of two top passenger officers at the 29th annual convention (and 15th annual sales meeting) of the American Association of Railroad Ticket Agents, at Miami Beach, Fla., November 10 and 11.

More than 400 registered members and guests heard F. H. Baird, assistant vice-president—passenger traffic, New York Central, and E. E. Gordon, passenger traffic manager, Chicago & Eastern Illinois, detail the persistent decline of railroad passenger traffic, in relation to its potential, and urge greater attention to sales effort by those railroaders having personal contact with the public. Mr. Baird also read a brief address of welcome prepared by J. F. Whittington, president of the American Association of Passenger Traffic Officers, and general passenger traffic manager of the Baltimore & Ohio, who was unavoidably absent.

Taking the theme "Salesmanship," the NYC passenger chief contended that "there's something seriously wrong with the way we're selling passenger transportation. If proof is needed, we can find it in the fact that we're not selling *enough* passenger transportation . . . The ironic fact is that, as highway traffic becomes more nerve-wracking and more dangerous, more people, nevertheless, make their trips by auto . . ." Mr. Baird challenged the ticket agents to consider their essential role as salesman. "Let's be frank with ourselves. Let's ask ourselves 'Are we really selling?' Do we think of ourselves as *sales* people? Or do we . . . consider ourselves merely custodians of the window or the counter, who will give people something if they come up and ask for it—provided of course they're clever enough to know exactly what they want and are persistant enough to demand it, in spite of the difficulties which we may put in the way of their getting it."

Regarding rivals, the speaker offered "it is no answer to say that our customers are being weaned away from us by newer, flashier forms of subsidized transportation. Such agencies do not have the essentials of year-round service we possess, nor the qualities of safety, comfort, relaxation and dependability. We have the facilities, the advertising, the tools—but, the question arises whether we are using them in our own best interest."

Sales Training Primitive

"Retail selling offices" are so important to railroad revenues that they must find how to increase their efficiency, to arrest the "discouraging downward trend in passenger business," declared Mr. Gordon, in a talk titled "Make New Friends—But Keep the Old." While the railroads have more potential travelers to sell than ever before, and better service to sell, there persists a steady decline of traffic and "loss of prestige and position."

While it is true that "nobody makes friends or influences people like the ticket seller," and ticket sellers are the "front line soldiers—the bread and butter of our business," the speaker contended, "ticket offices are too often considered banking institutions — not *sales* offices." He asked: "How often does management get out on the retail sales floor to find out how our salesmen are working? We don't get out on our railroads enough."

Sales training of ticket sellers came in for severe criticism. "Actually it is a joke," said Mr. Gordon, characterizing it as mostly the mechanics of taking orders—with too much emphasis on the necessity of "getting enough for the ticket" and dating it correctly. "A new sales person is virtually on his own." The novitiate has to depend upon what he picks up from older colleagues and their doctrine may not be sound. He wound up by insisting that "Americans still respond to personal attention. There is no substitute for personal salesmanship."

"Elastic Market"

Arguing that "passenger travel of the pleasure type is the railroads' only truly elastic market," W. H. Schmidt, Jr., executive editor of *Railway Age*, described the manifold development of travel desire and habit by the automobile. In the middle of the depression of the thirties, the average American was spending more than twice as much for travel as he did in the boom period of 1917-19. The growth today must be several times as much more. Despite the fact that the automobile absorbed the great part of this growth, some of it went to common carriers. "The great task of the railroads is to

get the public to transfer some of those dollars from the 8 per cent of total expenditures they put into automobile movement, or from the 4 per cent devoted to "recreation," to expand the less than 2 per cent they spend on public transportation (including daily commutation).

The passenger market is 150 million people moving 2,500 miles a year apiece. If the railroads could attract but one-fifteenth of that portion moving by auto, for intercity movements, they could double their business. Mr. Schmidt expressed the opinion that only the ticket seller is in close enough touch with the public to sound out the rapid changes in taste. "The public is fickle—fast; the day may come when they'll want to ride upside down; and the winner in the passenger field is the organization which finds that out first."

The speaker urged that ticket sellers be given the tools to enhance their value to the roads—in particular "more travel for themselves, so they'll know what to sell," and some kind of incentive above and beyond standard salary rates—whether they be commissions for sales made in off-duty hours, contest prizes for office groups, or what-not. "This suggestion is made in full recognition of the thorny problems of quotas, office expenses, pay scales and the rest, which railroad men better qualified than I have referred to. I observe only that, in these days, no sales force can operate to maximum potential without some kind of incentive apart from standard rates of pay."

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Transport agency	Passenger-miles (billions) 1950	1951[1]	Percent of change 1951 vs. 1950	Percent of annual total 1950	1951
Railways, steam and electric	32.5	35.3	+ 8.70	8.11	7.88
Highways:					
Motor carriers of passengers	21.2	21.5	+ 1.15	5.31	4.80
Private automobiles	337.3	379.3	+12.45	84.27	84.65
Inland waterways, including Great Lakes	1.2	1.4	+12.02	.30	.30
Airways (domestic revenue service)	8.0	10.6	+32.00	2.01	2.37
Grand total	400.3	448.1	+11.93	100.00	100.00

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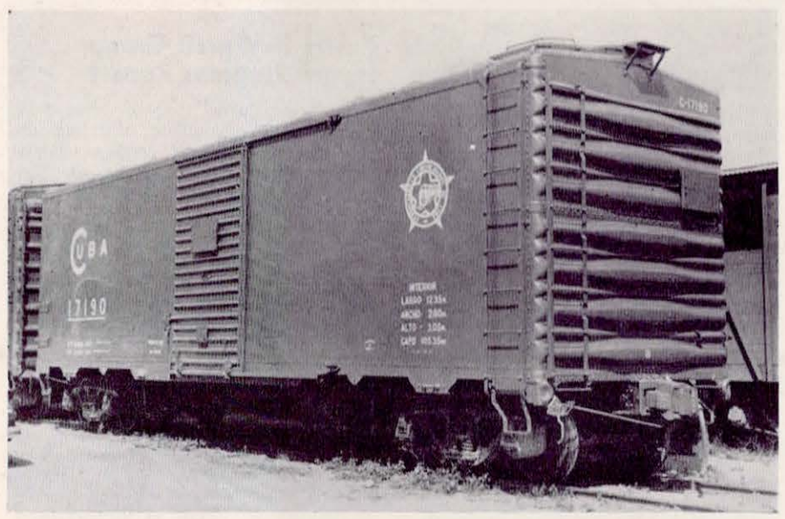

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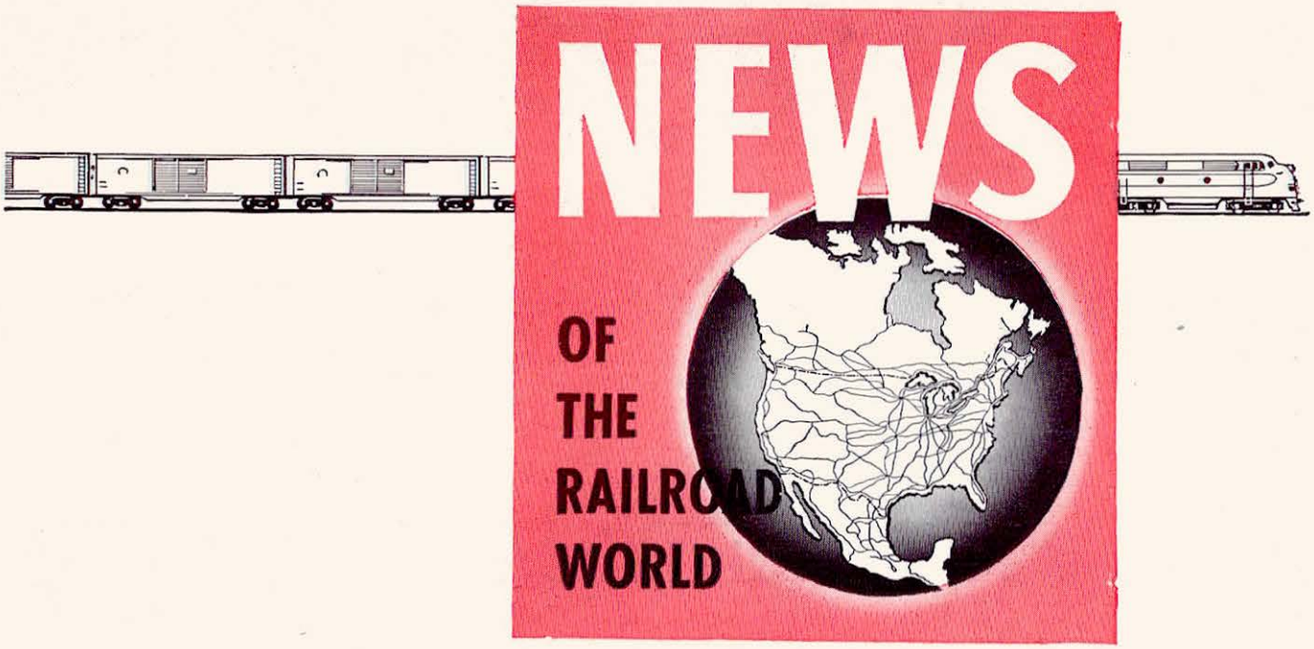

No Substitute for Personal Passenger Selling, Traffic Heads Insist

That there is something seriously wrong with the way railroads are selling passenger service, and that retail selling still demands the personal effort of the ticket agent, were the contentions of two top passenger officers at the 29th annual convention (and 15th annual sales meeting) of the American Association of Railroad Ticket Agents, at Miami Beach, Fla., November 10 and 11.

More than 400 registered members and guests heard F. H. Baird, assistant vice-president—passenger traffic, New York Central, and E. E. Gordon, passenger traffic manager, Chicago & Eastern Illinois, detail the persistent decline of railroad passenger traffic, in relation to its potential, and urge greater attention to sales effort by those railroaders having personal contact with the public. Mr. Baird also read a brief address of welcome prepared by J. F. Whittington, president of the American Association of Passenger Traffic Officers, and general passenger traffic manager of the Baltimore & Ohio, who was unavoidably absent.

Taking the theme "Salesmanship," the NYC passenger chief contended that "there's something seriously wrong with the way we're selling passenger transportation. If proof is needed, we can find it in the fact that we're not selling *enough* passenger transportation . . . The ironic fact is that, as highway traffic becomes more nerve-wracking and more dangerous, more people, nevertheless, make their trips by auto . . ." Mr. Baird challenged the ticket agents to consider their essential role as salesman. "Let's be frank with ourselves. Let's ask ourselves 'Are we really selling?' Do we think of ourselves as *sales* people? Or do we . . . consider ourselves merely custodians of the window or the counter, who will give people something if they come up and ask for it—provided of course they're clever enough to know exactly what they want and are persistant enough to demand it, in spite of the difficulties which we may put in the way of their getting it."

Regarding rivals, the speaker offered "it is no answer to say that our customers are being weaned away from us by newer, flashier forms of subsidized transportation. Such agencies do not have the essentials of year-round service we possess, nor the qualities of safety, comfort, relaxation and dependability. We have the facilities, the advertising, the tools—but, the question arises whether we are using them in our own best interest."

Sales Training Primitive

"Retail selling offices" are so important to railroad revenues that they must find how to increase their efficiency, to arrest the "discouraging downward trend in passenger business," declared Mr. Gordon, in a talk titled "Make New Friends—But Keep the Old." While the railroads have more potential travelers to sell than ever before, and better service to sell, there persists a steady decline of traffic and "loss of prestige and position."

While it is true that "nobody makes friends or influences people like the ticket seller," and ticket sellers are the "front line soldiers—the bread and butter of our business," the speaker contended, "ticket offices are too often considered banking institutions — not *sales* offices." He asked: "How often does management get out on the retail sales floor to find out how our salesmen are working? We don't get out on our railroads enough."

Sales training of ticket sellers came in for severe criticism. "Actually it is a joke," said Mr. Gordon, characterizing it as mostly the mechanics of taking orders—with too much emphasis on the necessity of "getting enough for the ticket" and dating it correctly. "A new sales person is virtually on his own." The novitiate has to depend upon what he picks up from older colleagues and their doctrine may not be sound. He wound up by insisting that "Americans still respond to personal attention. There is no substitute for personal salesmanship."

"Elastic Market"

Arguing that "passenger travel of the pleasure type is the railroads' only truly elastic market," W. H. Schmidt, Jr., executive editor of *Railway Age*, described the manifold development of travel desire and habit by the automobile. In the middle of the depression of the thirties, the average American was spending more than twice as much for travel as he did in the boom period of 1917-19. The growth today must be several times as much more. Despite the fact that the automobile absorbed the great part of this growth, some of it went to common carriers. "The great task of the railroads is to

get the public to transfer some of those dollars from the 8 per cent of total expenditures they put into automobile movement, or from the 4 per cent devoted to "recreation," to expand the less than 2 per cent they spend on public transportation (including daily commutation).

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The tie cost index numbers, based on 1941 as 100, rose uninterruptedly from 111.4 in 1942 to 1951's 227.7. The rail cost index, on the same base year, did not get more than fractionally above 100 until 1944, when it was 102.7. Thereafter it rose steadily to 1951's 195.4.

Treated cross ties laid in replacement last year totaled 27,938,000, their total cost having been $83,449,000. The comparable 1950 figures were 29,340,000 ties and $81,881,000. "The cost figures," the bureau explained, "include, in addition to the cost of ties, the transportation charges on foreign lines, the cost of tie trains, loading, inspection, and the handling of ties in general supply, storage and seasoning yards and at treating plants. The figures do not include the cost of unloading, hauling over carriers' own lines . . . nor the cost of placing ties in tracks."

As to untreated ties, the bureau said the railroads laid only about 1.1 million of them in replacement last year. That compared with a 1941 figure of 5.8 million. The average cost per untreated tie increased from 81.8 cents in 1941 to $1.373 in 1950, a rise of 67.8 per cent, the bureau also said.

Rails laid in replacement last year totaled 1,130,614 long tons, and the total cost was $95,544,000. The comparable 1950 figures were 1,208,038 tons and $96,832,000. The bureau explained that the cost figures "include, in addition to the cost of the rails, the cost of loading at point of purchase ready for shipment, freight charges paid foreign lines . . . and cost of handling rails in general supply and storage yards. They do not include the cost of unloading, hauling over carriers' own lines, placing in tracks or train service in connection with the distribution of rails."

Senator Won't Decide Ogden Gateway Case, I.C.C.

Acting Chairman Lee of the Interstate Commerce Commission has assured the Union Pacific that public statements of Senator Johnson, Democrat of Colorado, "can have no part in connection with the commission's consideration of the evidence and argument" presented in the Ogden gateway case.

That is the proceeding (No. 30297) which involves the complaint wherein the Denver & Rio Grande Western is asking the commission to require the UP to participate in joint through rates via the Ogden, Utah, gateway (*Railway Age*, October 20, page 15). Commissioner Lee's assurance was in a November 7 letter which he wrote to the UP president, A. E. Stoddard, after the latter had called the commission's attention to a recent Johnson pronouncement on the case.

The senator's pronouncement was a statement, headed "editorial," which occupied a full page in the October 28

issue of the Wichita (Kan.) Beacon. It was signed by the senator and it expressed views in favor of the Rio Grande position in the case.

After noting that the examiner's proposed report "will result, if adopted by the commission, in a complete victory for the Rio Grande," Senator Johnson had this to say: "I firmly believe that the opening of the Ogden Gateway would benefit not only the shippers and receivers of freight in Kansas and Colorado, but throughout the nation as well."

UP President Stoddard sent photostatic copies of the "editorial" to all members of the commission along with copies of a November 3 letter which he addressed to Chairman Alldredge. In the latter's absence, the matter was handled by Acting Chairman Lee.

Mr. Stoddard, as he put it, had "no doubt" that the "Rio Grande people" would call the Johnson statement to the attention of the commissioners "in the hope of influencing . . . their decision by demonstrating that the senator "is still 'riding herd' on this case and that he anticipates that the loss of the through routes and joint rates by the Rio Grande 40 to 46 years ago 'may shortly be retrieved.' "

The UP president also recalled that Senator Johnson made like statements in radio addresses which he delivered in January and February of 1951, and which the UP promptly called to the commission's attention. Mr. Stoddard went on to "wonder" if the senator "is investigating and attempting off the record to intermeddle" in other pending cases "that are of interest to the people of Colorado and Kansas and other states."

Mr. Stoddard also said that he was sending his letter and "the so-called 'editorial' " to each of the commissioners "in order that all of you may know that we are fully aware of this latest effort to exert upon the commissioners whatever influence his strategic position as chairman of the Senate committee on interstate and foreign commerce may have.

Acting Chairman Lee's letter acknowledged receipt of the Stoddard letter and the copy of the "editorial." It went on to cite commission orders of March 12, 1951, and June 4, 1951, which denied a UP petition for reopening of the Ogden case record for the purpose of inserting transcripts of the radio addresses by Senator Johnson.

"This action," Mr. Lee continued, "clearly showed that this commission will not consider matters outside of the record in passing upon the issues presented to it for determination. It is, therefore, obvious that the editorial referred to can have no part in connection with the commission's consideration of . . . the record now before the commission."

I.C.C.'s Arpaia Wants Commission Leadership on Transport Policy

Reorganization of the Interstate Commerce Commission so that it may take the initiative in formulating transportation policy, instead of trying to regulate on a case-by-case basis, was suggested by Commissioner Anthony F. Arpaia in a November 12 speech in Washington, D.C.

Addressing the Washington chapter of I.C.C. practitioners, Mr. Arpaia said the "real source of trouble" with the commission is that it has developed "too much along judicial lines and not enough along administrative lines."

There is nothing wrong with the commission that "intelligent reorganization, the application of real administrative principles and money enough to do the job won't cure," he said.

The commissioner cited the I.C.C. chairmanship as an example of "administrative monstrosity." Out of 11 men of equal power one is elected "front man" each year. Calling him a chairman, Mr. Arpaia said, is "sheer euphemism." It is an "honor" which in reality is "an invitation to frustration."

The Transportation Act of 1940 established new policy on competitive transportation and imposed upon the I.C.C. an "entirely different type of burden," the commissioner said. The act recognized that the era of monopoly was over, that each type of transportation has a place, with the advantages in each to be preserved.

The commission was not operationally and structurally organized to meet this burden, nor was the transportation industry fully prepared to accept it, Mr. Arpaia continued. Failure to appreciate this has led to the dissatisfaction and ferment since 1940, he said.

"A diffuse organization without a responsible head can never serve an administrative purpose," he added. "An administrative agency with a job to do is quite different from a court. The court waits until a controversy arises and is brought before it; then it decides who is right and who is wrong and stops there."

Passage of the 1940 act rendered inadequate the quasi-judiciary adversary type of proceeding before the I.C.C., and made it no longer feasible to wait for matters to be brought to the commission, Mr. Arpaia said. "It was necessary to take the initiative, to guide the industry and to declare policy," he declared.

Canada Calls 1941 Seaway Agreement A Dead Issue

The Canadian government has advised the State Department that it considers the 1941 agreement on joint Canada-United States construction of the St. Lawrence seaway a dead issue.

The 1941 agreement failed repeatedly to win approval in the United States Congress. Nor was it ratified by the Canadian Parliament.

On October 28 the International Joint Commission approved a joint power project in the International Rapids section of the St. Lawrence. The approval order said the power project shall be so planned and constructed as not to conflict with possible navigation uses of the river.

Canada advised this country that it considers the 1941 agreement "superseded" by the October 28 order. Canada now plans to build the seaway project on her own.

Tariff Research Group Issues Progress Report

The Railroads' Tariff Research Group has distributed to tariff publishing agents and tariff issuing officers of individual railroads its Freight Tariff Improvement Bulletins Nos. 21 and 22.

The tariff-making specifications set out in these bulletins were approved at a joint meeting in Washington on July 16 of the railroads' Administrative Committee and the Cooperating Committee of the National Industrial Traffic League; but they could not be released until enabling permissions had been obtained from state and federal regulatory agencies.

Bulletin No. 21 deals with the matter of lists of participating carriers in supplements to tariffs. It is designed to reduce the volume of supplemental matter through "streamlining" and the elimination of wordage not essential to tariff users.

Bulletin No. 22 is expected to bring about nationwide uniformity in the system for numbering supplements to tariffs.

Supreme Court Won't Review Segregation Ruling

The United States Supreme Court has left in effect a lower-court ruling that railroad regulations calling for segregation in different coaches of white and Negro passengers impose an unconstitutional burden on interstate commerce in violation of the commerce clause of the Constitution.

The Supreme Court's action was an order denying a petition filed by the Atlantic Coast Line for review of the decision of the lower court, which was the United States Circuit Court of Appeals for the Fourth Circuit. The case was docketed in the Supreme Court as No. 360, Atlantic Coast Line v. William C. Chance.

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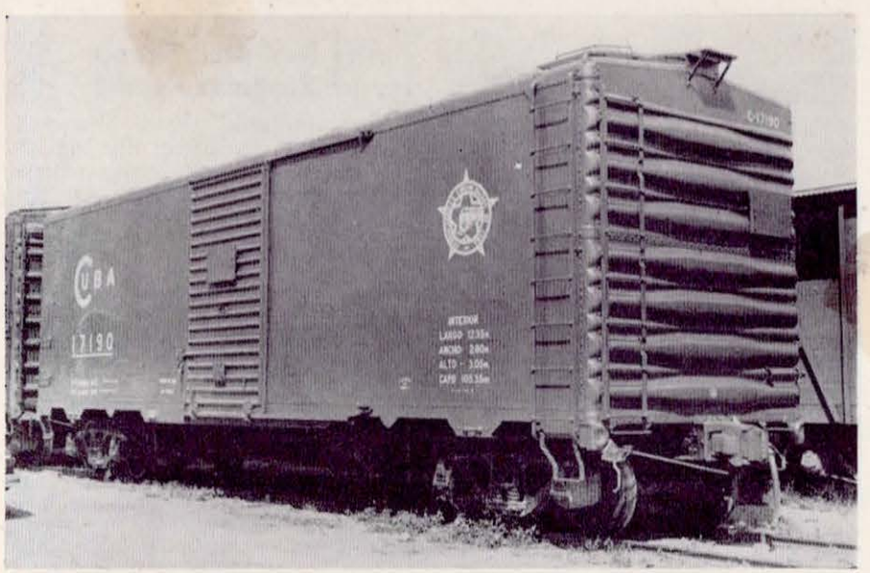

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On October 21, in the U. S. District Court for the District of Oregon, "judgment was entered in favor of the government and against the carrier in the sum of $500 without costs, in the case of **U.S. v. Oregon Pacific & Eastern.**" This was a civil penalty "for failure to comply with the provisions of Service Order 859 and Amendment No. 1 thereto."

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On September 25, in the U. S. District Court for the Northern District of Ohio, "a stipulation for judgment was filed in favor of the government and against the carrier in the sum of $500 and costs, in the case of U.S. v. Ann Arbor." This was a civil penalty "for failure to comply with the provisions of paragraph (a) (7) of Service Order 866, as amended."

On September 30, in the U.S. District Court for the Northern District of Ohio, "a stipulation for judgment was filed in favor of the

government and against the carrier in the sum of $1,350 and costs, in the case of **U.S. v. Baltimore & Ohio.**" This was a civil penalty "for failure to comply with provisions of paragraph (a) (7) of Service Order 866, as amended.

On September 4, in the U.S. District Court for the Northern District of Ohio, "a stipulation for judgment was filed in favor of the government and against the carrier in the sum of $700 and costs, in the case of **U.S. v. Pennsylvania.**" This was a civil penalty "for failure to comply with provisions of paragraph (a) (7) of Service Order 866, as amended.

Freight Car Loadings

Loadings of revenue freight in the week ended November 15 totaled 828,723 cars, the Association of American Railroads announced on November 20. This was a decrease of 475 cars, or 0.1 per cent, compared with the previous week; an increase of 14,465 cars, or 1.8 per cent, compared with the corresponding week last year; and a decrease of 8,735 cars, or 1 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended November 8 totaled 829,198 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 8

District	1952	1951	1950
Eastern	136,662	129,900	142,372
Allegheny	162,000	158,565	168,510
Pocahontas	58,085	63,052	60,015
Southern	133,209	130,793	136,845
Northwestern	136,557	107,827	127,542
Central Western	137,288	138,431	137,781
Southwestern	65,397	62,835	66,815
Total Western Districts	339,242	309,093	332,138
Total All Roads	829,198	791,403	839,880
Commodities:			
Grain and grain products	53,060	52,567	55,636
Livestock	12,376	13,957	12,451
Coal	146,815	167,059	153,412
Coke	14,990	16,968	16,045
Forest products	47,248	45,497	48,327
Ore	81,566	40,366	62,764
Merchandise l.c.l.	74,761	73,230	86,758
Miscellaneous	398,382	381,759	404,487
November 8	829,198	791,403	839,880
November 1	862,012	837,617	863,149
October 25	760,741	864,800	887,935
October 18	838,377	886,648	891,230
October 11	842,713	868,683	888,889
Cumulative total 45 weeks	33,002,176	35,451,607	33,733,845

In Canada. — Carloadings for the seven-day period ended November 7 totaled 83,469 cars, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 7, 1952	83,469	33,240
Cumulative Totals		
November 7, 1952	3,567,353	1,518,956

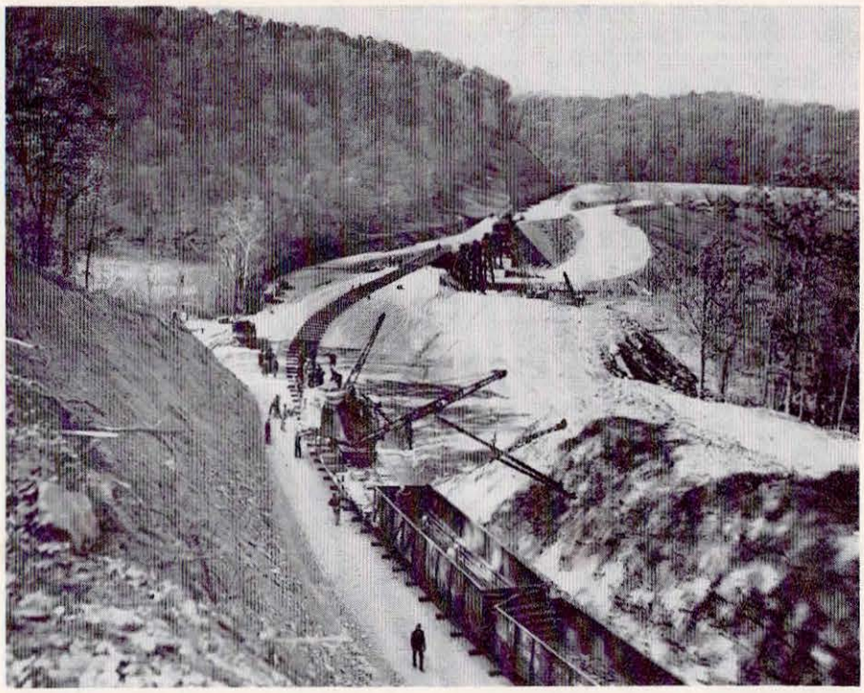
GAEX Car Annual Profit Said to Be $13,800 Each

The average common boxcar on American railroads earns $450 profit a year, compared with $13,800 a year earned by the average GAEX boxcar, Fairman R. Dick, railroad economist, said in New York on November 19. Speaking at the "Second Railroad Economics Dinner," Mr. Dick compared the earning power of the GAEX cars — owned and operated by the General American-Evans Company and designed and built by the General American Transportation Corporation —with the profit records resulting from dieselization.

Recalling how in May 1950 he had prophesied savings of a billion dollars a year with the new cars, not then in service (*Railway Age*, May 27, 1950, page 51), Mr. Dick said that "in records of actual service the GAEX car has bettered the original estimate by a wide margin."

The committee for the dinner at the Hotel Pierre consisted of Arthur W. Page, business consultant; Mr. Dick; Charles J. Symington, chairman of the Symington-Gould Corporation; and Lester N. Selig, chairman of General American Transportation.

A group of traffic manager representing various segments of American industry presented summaries of their respective companies' experience with the GAEX car. J. M. Symes, executive vice-president of the Pennsylvania, also was among speakers at the dinner.



THE CHESAPEAKE & OHIO'S new 4½-mile spur track to the site of the new atomic energy plant in Pike county, Ohio (*Railway Age*, October 20, page 18), was recently completed in what is described as a record-breaking 40 working days. A section of the new spur is shown above. Revenue freight, including machinery and materials for a new railroad yard being built at the plant site by the Atomic Energy Commission, began moving over the line on November 7, while final work was being done. The new spur, which leaves the C&O main line at Robbins, Ohio, includes two timber trestles both 43 feet high and totaling 550 lineal feet, and costing $1,150,000. Track was laid and bridges were built by railroad forces, while grading was done by the L. L. Smith Construction Company of Huntington, W. Va., the L. S. Coleman Company of St. Albans, W. Va., and Haley, Chisholm & Morris of Charlottesville, Va., who pooled their equipment. More than 500,000 cubic yards of material were moved.

Captain Nevins Is New Deputy Director of M.T.S.

Captain Joseph H. Nevins, Jr., of the Navy has succeeded Colonel A. G. Viney as deputy director of the Military Traffic Service of the Department of Defense. Col. Viney was assigned to M.T.S. in 1950, when the newly formed unit was headed by E. Grosvenor Plowman.

Captain Nevins, a graduate of the Naval Academy in 1925, was serving as commander of Transport Division 22 in the Atlantic Amphibious Force.

RRs "Captive Industry" in Free Economy, Says Fisher

"Railroads operating in a 20th century economy are being regulated by a philosophy established in the 19th century," Joseph A. Fisher, president of the Reading, said in an address to a gathering of railroad officers and their guests at a luncheon in the main concourse of Pennsylvania Station-30th Street, Philadelphia, on November 18. The luncheon, first ever held in the concourse, marked official opening of the exhibition in Philadelphia of the 100,000th freight car built for eastern railroads since the end of World War II. The Chinese red box car, now touring eastern cities, is on display inside the station.

"Today," the Reading chief executive continued, "railroads are a captive industry in a free economy. If they fall

into bureaucracy simply because of public complacency they will acquire the dubious distinction of leading, step by step, the other elements of our economy down the same path." The only solution to the question of whether railroads are to survive as a free-enterprise industry, M. Fisher said, is enactment of modernized national transportation laws.

RRs, Electric Industry In Anti-Socialism Van

Railroads and the electric industry have the primary responsibility for saving America from socialism, Bayard L. England, president of the Edison Electric Institute and also of the Atlantic City Electric Company, said in White Sulphur Springs, W.Va., on November 15. Addressing the ninth annual convention of the National Association of Railroad Women, which officially changed the name of the organization to American Council of Railroad Women, Mr. England added "it is evident that those who hope to get overall control of our economy and people into the retentive hands of an all-powerful government have the means of attaining that dominance if they can take over one or both of these two vital industries."

"By their willingness to meet public needs in original and aggressive ways the electric companies are becoming increasingly effective in this struggle," Mr. England continued. "Five companies in New York state are making progress in preventing the federal government from taking over power development at Niagara Falls by being willing and able to do the job themselves and by exposing the federal proposal for what it is—an adventure in socialism . . . The railroads have been expanding at the rate of a billion dollars a year and they are conducting a far-reaching program of modernization. The public must know of their willingness and ability to serve through the continued demonstration of railroad determination to stay at the forefront of the nation's transportation. Concerted efforts must be made to prove to the people that antiquated regulations encrusting railroad operation do not aid the public good, but rather hold back the progress towards new developments and improved service which Americans have every right to expect from their railroads."

Other speakers at the convention, which was in session November 13-15, were Raymond T. Anderson, general passenger traffic manager of the Santa Fe; Margaret Hirst of the Railroad Retirement Board; Clifford M. Ramsdell, secretary-treasurer of the Federation for Railway Progress; Robert F. Nelson, managing director of the Virginia Travel Council; Dorothy Roe, women's editor of the Associated Press; and Edith Stone, librarian of the Simmons-Boardman Publishing Corporation, publisher of *Railway Age*.

Methods of selling American women on railroads and rail travel were explored by a November 14 panel led by Inez DeVille of the Baltimore & Ohio. Participants in the panel included Mildred Drechsler, B&O; Marion McKinney and Mary Buchanan of the Union Pacific; Velma McPeek, Chicago, Burlington & Quincy; Vera Elvert, Gulf, Mobile & Ohio; and Esther Craig, Seaboard Air Line.

Guy O. Beale, vice-president, Chesapeake & Ohio, was toastmaster at the annual banquet on the convention's final night. The council's new officers (see accompanying photograph), were installed at ceremonies immediately preceding the banquet.

NEW OFFICERS of the American Council of Railroad Women, unanimously elected at the organization's recent ninth annual convention, are: President, Edith J. Alden (seated, center), secretary and assistant treasurer, Chicago, Burlington & Quincy; first vice-president, Marion A. McKinney (seated, left), director of the women's travel department, Union Pacific; second vice-president, Hazel R. Williams (seated, right), special representative, Minneapolis & St. Louis; secretary, Eleanor Runquist (standing, left), personnel assistant, employee relations department, Pullman Company; and treasurer, Mildred Drechsler (standing, right), special representative of the Baltimore & Ohio.

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended November 15 were announced by the Association of American Railroads on November 20 as follows:

	Surplus	Shortage
Plain Box	14	3,932
Auto Box	0	15
Total Box	14	3,947
Gondola	6	1,644
Hopper	0	1,345
Covered Hopper	0	108
Stock	562	0
Flat	5	139
Refrigerator	2,497	0
Other	375	0
Total	3,459	7,183

Sir Harold Clapp Dies

Sir Harold W. Clapp, of Australia, director-general and chairman of land transport in that country from 1942 to 1944, died on October 21. He was 77 years old. Sir Harold had been chairman of the Victorian Railways Commissioners from 1929 to 1939. At the age of 26 Sir Harold came to the United States to study rail transportation and while here rose to high administrative positions with various railroads.

Truckers' Bulwinkle Case Job for Justice Dept.

The Interstate Commerce Commission has been advised that the task of bringing regulations of the Central States Motor Freight Bureau, Inc., "into conformity with the applicable statutory provisions" looks like "a job for the Department of Justice."

The advice was offered by Examiner Claude A. Rice in a proposed report recommending commission findings to the effect that rate procedures agreements for which the bureau is seeking approval are prohibited by Section 5a of the Interstate Commerce Act.

The proceeding out of which the proposed report has come is docketed as Section 5a Application No. 33. It involves the second application filed by the bureau, the first having been dismissed in July 1950, the examiner noted.

"The record now available," he added, "warrants the conclusion that it will require some very potent persuasion to induce the 50 governing directors of the bureau to eliminate from their by-law regulations, the objectionable features herein discussed . . . It looks like a job for the United States Department of Justice."

September Accidents

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of "steam railway" accidents for September, and for the first nine months of this year. The compilation, subject to revision, follows:

Item	Month of September		9 months ended with September	
	1952	1951	1952	1951
Number of train accidents*	829	850	7,362	8,123
Number of accidents resulting in casualties	34	30	390	393
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	110	114	791	883
Injured	85	92	744	782
Passengers on trains:				
(a) In train accidents*				
Killed	..	1	..	100
Injured	1	39	175	1,156
(b) In train-service accidents				
Killed	1	2	9	13
Injured	114	185	1,308	1,370
Travelers not on trains:				
Killed	..	1	8	5
Injured	49	50	527	530
Employees on duty:				
Killed	29	21	259	270
Injured	1,740	1,797	14,985	17,204
All other nontrespassers:**				
Killed	114	135	1,083	1,171
Injured	448	459	3,880	4,251
Total — All classes of persons:				
Killed	254	274	2,150	2,442
Injured	2,437	2,622	21,619	25,293

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $300 or more to railway property in 1951. Beginning January 1, 1952, this minimum was raised to $325. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	105	118	964	1,050
Injured	275	331	2,515	2,877

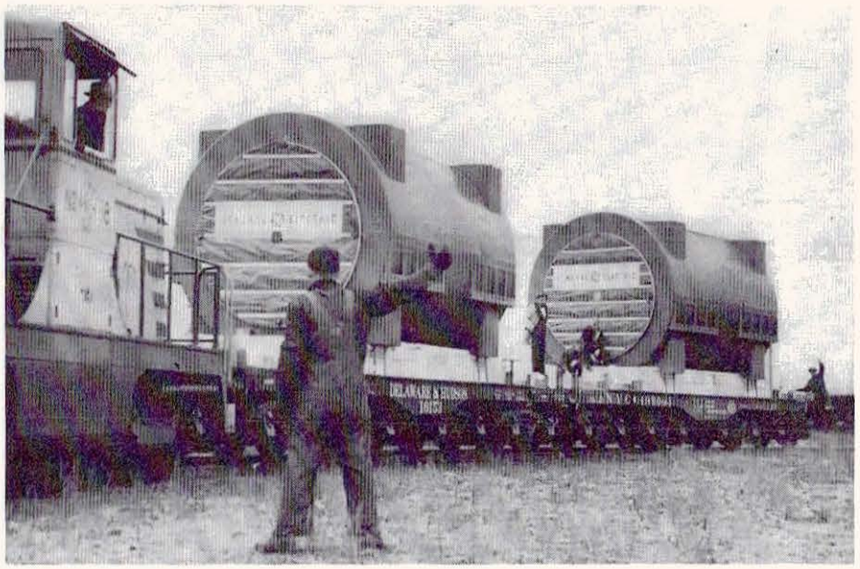
Smucker Quits D.T.A.; Returns to Pennsylvania

David E. Smucker has resigned from the directorship of the Defense Transport Administration's Railroad Transport Division and returned to his position as assistant chief engineer of the Pennsylvania.

Mr. Smucker was "on loan" from the PRR during his service with D.T.A., which began May 6 (*Railway Age*, May 12, page 18). He will continue temporarily to act as consultant to D.T.A. on matters relating to materials and equipment requirements of the railroads.

In announcing the resignation, D.T.A. Administrator James K. Knudson made public the following quotation from a letter he wrote to Mr. Smucker: "Our efforts in behalf of the railroads in this difficult emergency period have been materially aided by your contribution to the development of the D.T.A. program . . . You will be able to return to private life with the assurance that you have played an effective role in the defense effort."

Mr. Knudson also wrote a letter to PRR President Walter S. Franklin, saying in part: "D.T.A. has been fortunate in being able to turn to the transportation industry to borrow men of the calibre of Mr. Smucker to help build the nation's defense. Mr. Smucker's activities . . . have been of great value in placing railroads in a position to carry their share of the nation's transportation load in this period of emergency."



THIS SHIPMENT of heavy electric generating equipment, from the General Electric Company's Schenectady, N.Y., plant, is believed to have marked one of the rare occasions when more than one of the railroads' few special heavy-duty flat cars have been at the same place at the same time. Of the two cars pictured, each with a load carrying capacity of some 500,000 lb., one is owned by the Delaware & Hudson and one by the New York Central.

SP Holds Employee, Public Relations Conference

The Southern Pacific held a two-day system-wide public and employee relations conference in San Francisco this month. K. C. Ingram, assistant to the president in charge of public and employee relations, presided.

The conference, called by a railroad spokesman "the first large top-flight public and employee relations conference ever held by the Southern Pacific," followed a similar but smaller experimental meeting at Houston last spring.

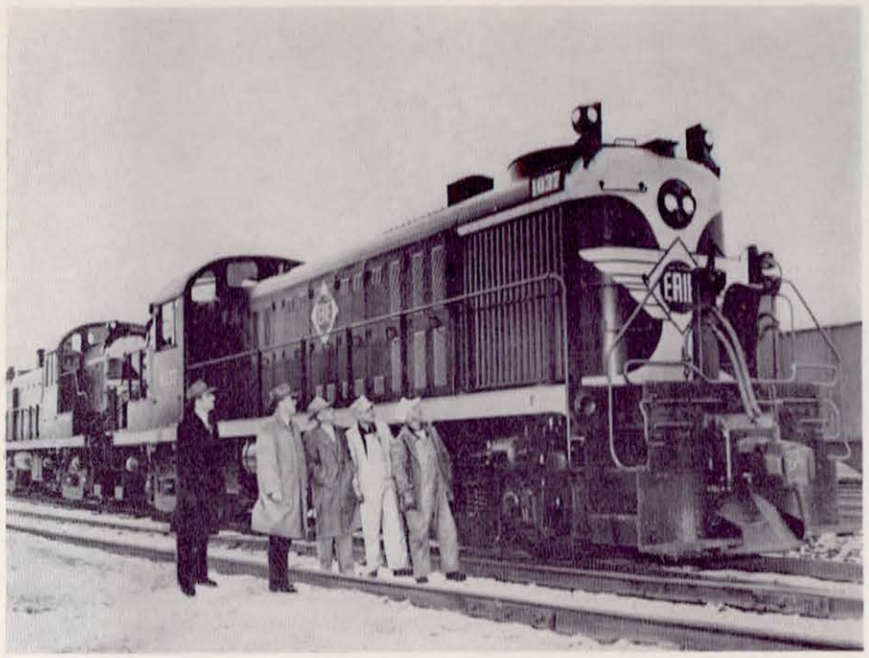
Keynoting the conference was recognition that each company officer and department head shares responsibility with the public relations staff in building effective public and employee relations. "It is vital that we work unceasingly in getting both our people and the public to think well of our company," D. J. Russell, SP president, said in his address which opened the meeting. "We just can't perform lip service, either. We must practice what we preach." Mr. Russell emphasized the importance of keeping employees fully informed about what the company is doing as a factor in increasing the employees' sense of participation.

A panel of SP vice-presidents and department heads discussed at the opening session what their various departments could do to continue building the types of relationships desired, and what assistance is needed by their departments from the public relations staffs. Taking part in this discussion were J. W. Corbett, operating vice-president; George L. Buland, vice-president in charge of the law department; W. W. Hale, vice-president, system freight traffic; C. E. Peterson, vice-president, system passenger traffic; U. E. Nordeen, assistant general auditor; L. B. Young, assistant to president; D. J. McGanney, vice-president; and J. C. Carter, executive assistant.

The SP, it was announced, plans more conferences at other key headquarter points.

Sturgis Replaces Pick As Chief of Engineers

Major General Samuel D. Sturgis, Jr., has been appointed Chief of Engineers, effective December 1, to succeed Lieutenant General Lewis A. Pick. General Pick will retire November 30, having reached the statutary retirement age. General Sturgis has been serving as commander of the Communications Zone, U.S. Army, in Europe.



DIESELIZATION OF ALL ERIE FREIGHT service was completed recently with receipt of two 1,600-hp. American Locomotive-General Electric diesel units. Observing one of the two new units are, left to right: Robert Conners, general foreman, diesel shops; W. G. Carlson, assistant superintendent of motive power; C. P. Brooks, mechanical engineer; F. M. Byers, fireman; and George Feyook, engineman. The Erie's diesel fleet includes 467 units, with five more still on order. Today the road owns 46 steam locomotives, of which only 30 are actually in service. They are used in local commuter service around Jersey City, N. J.

Review of Car Program Shows More Time Needed

Freight car production in 1952 has lagged so far behind schedule that the Defense Transport Administration has recommended a new "target date" for completion of the freight car expansion program.

Originally set at July 1, 1954, D.T.A. has suggested to the Defense Production Administration that this date be postponed to October 1, 1954.

D.T.A. made the recommendation in connection with its first "reappraisal" of the freight car program. The agency said it found "no need" for changing the original production goal set last April. That goal called for delivery of 296,500 new freight cars to the railroads between January 1, 1951, and July 1, 1954 (*Railway Age*, April 14, pages 12-13).

"Owing to the loss of steel products due to the steel strike of 1952 and other production losses, D.T.A. has suggested that the July 1, 1954, target date be postponed to October 1, 1954," a D.T.A. announcement said.

Reappraisal of the freight car program led D.T.A. to make these additional recommendations to D.P.A.:

Allotments of controlled materials for the second quarter of 1953 should be sufficient for construction of 28,500 new freight cars.

The second-quarter allotments should meet railroad requests for maintenance material, including 450,000 net tons of new rail.

Subsequent allotments should provide material for the construction of an average of 38,660 new freight car units per quarter.

These subsequent allotments should provide not less than 450,000 net tons of rail per quarter, exclusive of steel required for manufacture of frogs and switches.

D.P.A. should allocate maintenance material other than rail in the quantities for which individual railroads file requests.

Carriers, Patrons, Government in Forum

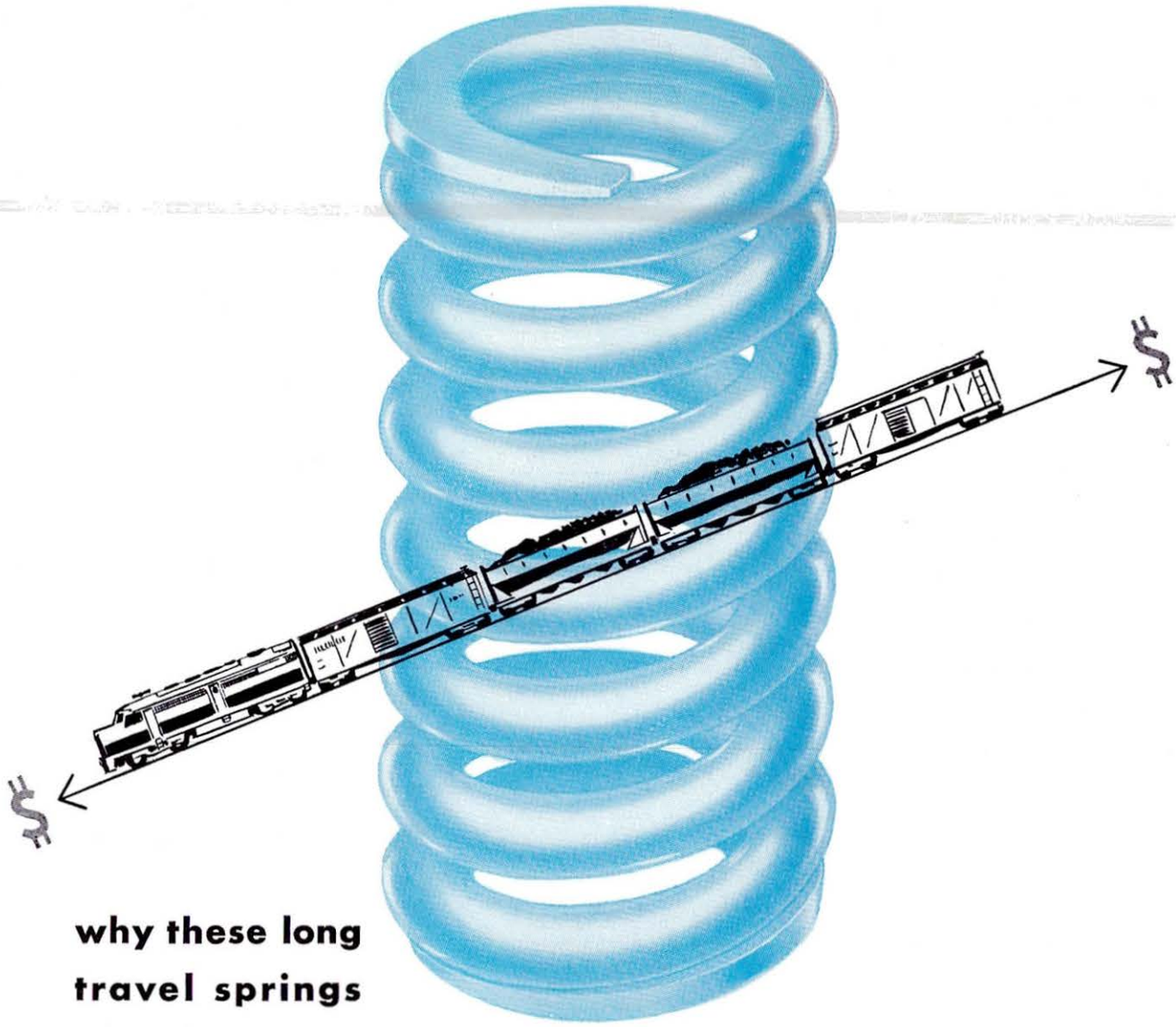
Representatives of transport agencies, shippers, and the federal government are scheduled to participate in the Regional Transportation Conference which will be held at the Nicollet Hotel, Minneapolis, December 10 and 11. The conference is being sponsored by the Chamber of Commerce of the United States in cooperation with the Minneapolis Chamber of Commerce and the Minneapolis Traffic Asosciation.

The railroad representative will be G. A. McNamara, president of the Soo Line, who will participate in a panel discussion of the question, "Is there too much transport regulation?" The discussion will be held December 11 under the chairmanship of Earl B. Smith, vice-president, General Mills, Inc.; other participants will include J. H. Carmichael, president, Capital Airlines; R. J. Babcock, president, Dakota Transfer & Storage Co.; R. J. Andress, vice-president (traffic), Service Pipe Line Company; and S. R. Sundstrom, president, Pennsylvania Greyhound Lines.

Other proceedings of the conference will include discussions of "Government Executive Agencies and Transport," by Jack Garrett Scott, under secretary of commerce for transportation; and "Economic and Political Changes Affecting Transportation," by D. G. Ward, director of transportation, Mathieson Chemical Corporation. Also, there will be a discussion by a shippers' panel of "Federal Aids to Transportation," and an address on "Legislative Objectives of the National Industrial Traffic League," by the chairman of the league's Special Committee on Transportation Outlook and Policy—A. H. Schwietert, traffic director of the Chicago Association of Commerce and Industry (*Railway Age*, November 10, page 77).

The day after the close of the conference, December 12, the U.S. chamber's Transportation and Communication Committee will hold a meeting, also at Minneapolis. The committee's program will cover various matters now before it for recommendations as to what chamber policies should be. These matters include user charges for publicly provided facilities, proposed repeal of the long-and-short-haul clause, and proposed legislation to expedite abandonments of unprofitable carrier services and to speed extension of interstate rate increases to intrastate traffic.

FREIGHT CREWS enjoy the air on the veranda of the Pennsylvania's modern rest facility for lay-over crews at Enola, Pa.



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Cotton Belt Meets Tough Haulage Problems With All-Purpose Alco-GE Road Switchers

The St. Louis Southwestern railroad is finding all-purpose Alco-GE road switchers to be the answer to its toughest haulage problems . . . whether in passenger, freight, or switching service.

"These Alco-GE locomotives handle an exceptional variety of assignments," comments a high official of the Cotton Belt, "and they do the job with greater economy than either steamers or any other capacity diesel that we own."

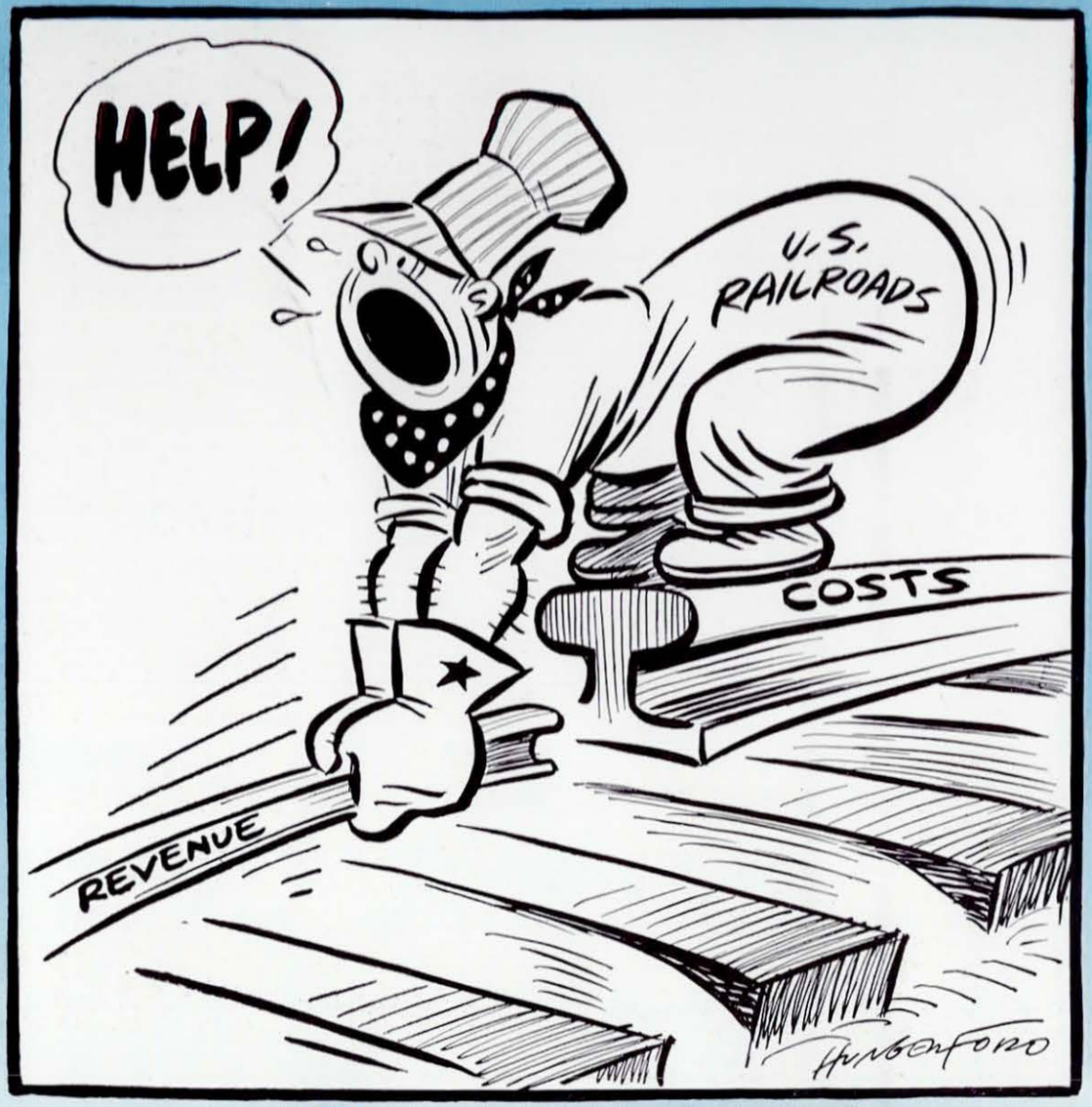
Alco-GE 1600-hp road switchers are "at home" on any Cotton Belt job—from the speedy "Blue Streak" freight service to the crack "Lone Star" passenger runs. Now celebrating its 75th anniversary of service to the Southwest, the Cotton Belt has dieselized 85% of its freight operations, 90% of its switching, and 60% of its passenger service in its heads-up bid to win more traffic to the rails.

113-304

Alco GE

AMERICAN LOCOMOTIVE and GENERAL ELECTRIC

Trying To Make Ends Meet — By Hungerford



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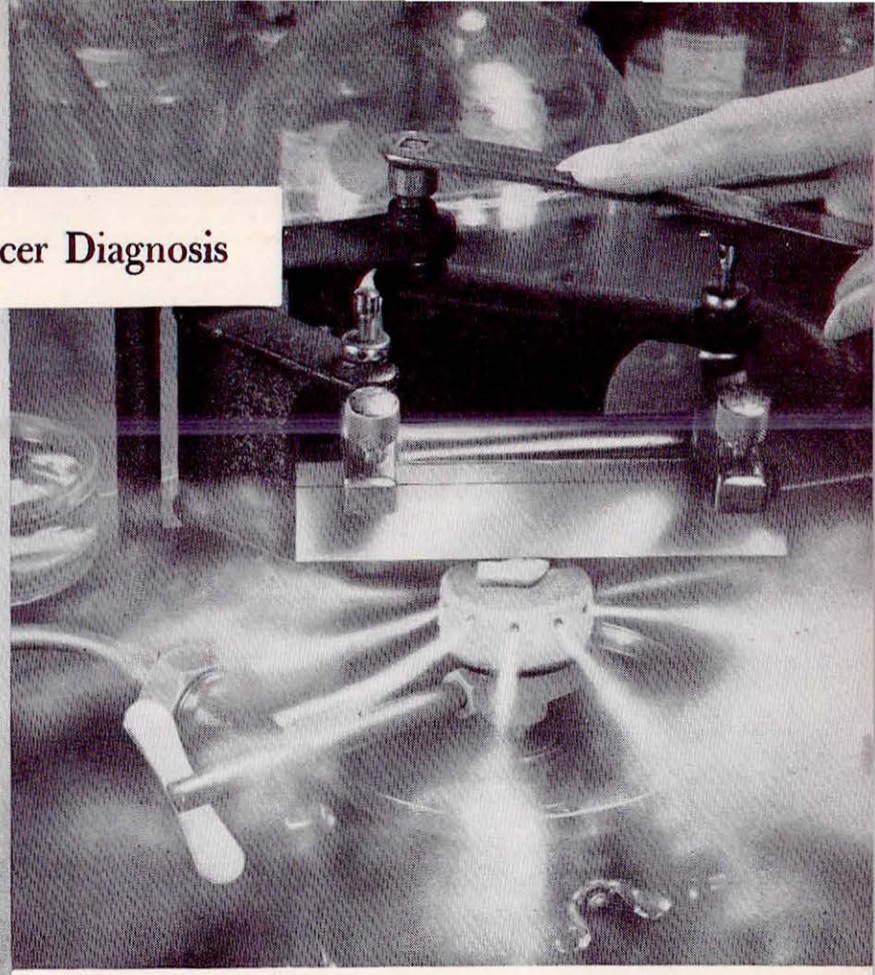
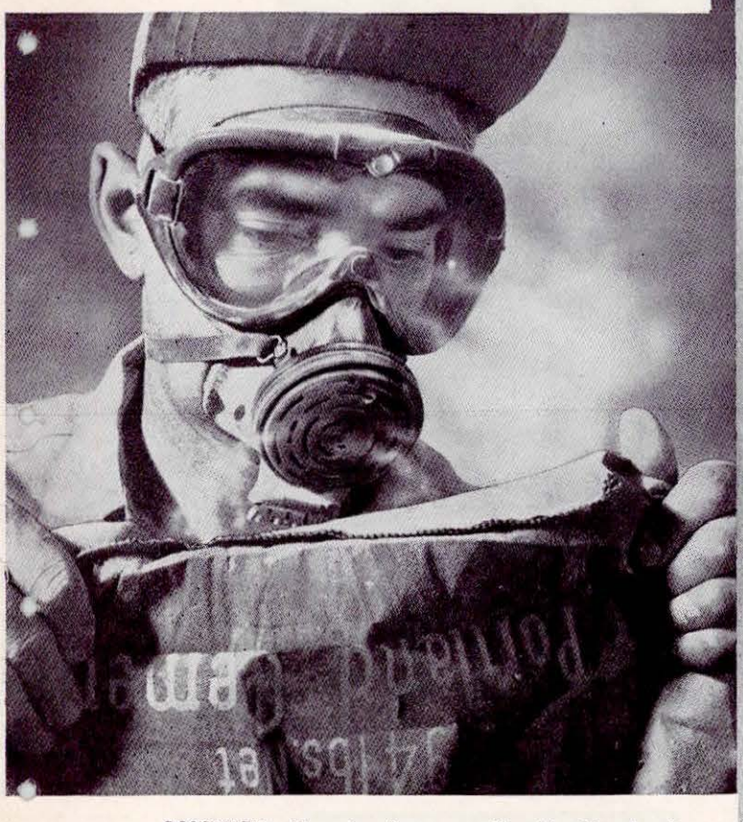
PROBLEM: Cancer Diagnosis



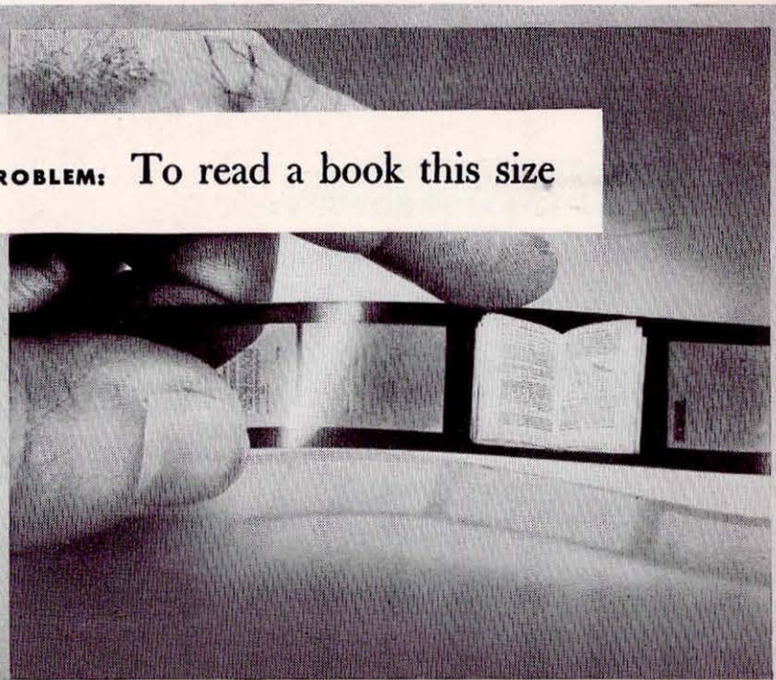
ANSWER: Is it cancer or not? While the patient lies on the operating table, pathologists can look at a microscopic slice of human cell tissue and find out. First, the tissue is frozen by carbon dioxide gas, then is sliced by a *microtome* to an incredible thinness of 12 microns (.00048 inch). Once the finest microtomes came from Europe. American Optical has long since equaled and passed their precision.

PROBLEM: To breathe clean air in a foul room

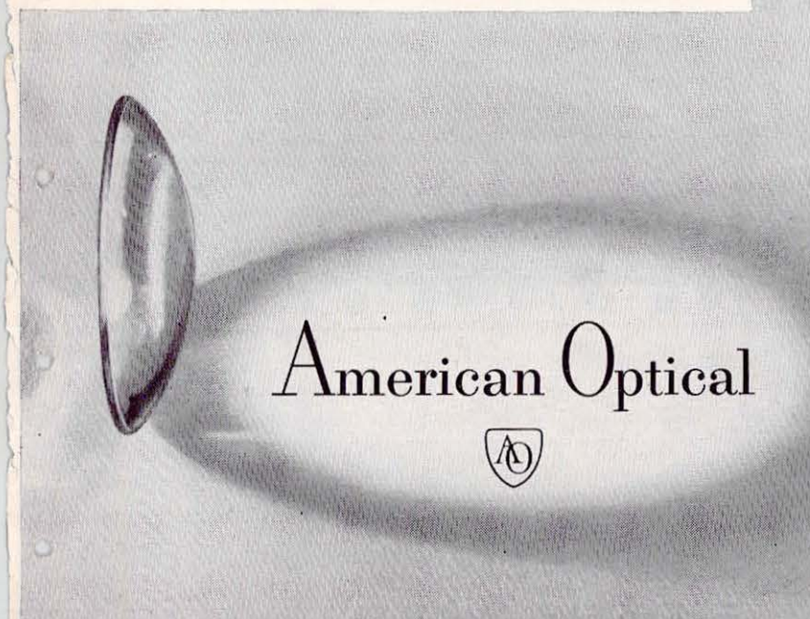


ANSWER: Trapping dusts as small as 24 millionths of an inch in diameter is now possible by American Optical's revolutionary new respirator filter. This chemically treated filter has 40 times the efficiency of similar untreated filters, does work of filters 8 times as large, yet is no harder to breathe through.

PROBLEM: To read a book this size



ANSWER: Books and records, too valuable to lose, are now copied on tiny film, saving time, shelf space, money. American Optical's microfilm "reader" enlarges to natural size and clearly projects the microfilm. These flat, undistorted projected images may be read comfortably for hours. Write us about your development problems. Address American Optical Company, 67 Vision Park, Southbridge, Mass.



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Road Diesel—
2400 Horsepower Passenger Locomotive

Road Diesel—
1600 Horsepower Freight Locomotive

Road Switcher—
1600 Horsepower Road Switching Locomotive

Road Switcher—
1600 Horsepower Road Switching Locomotive

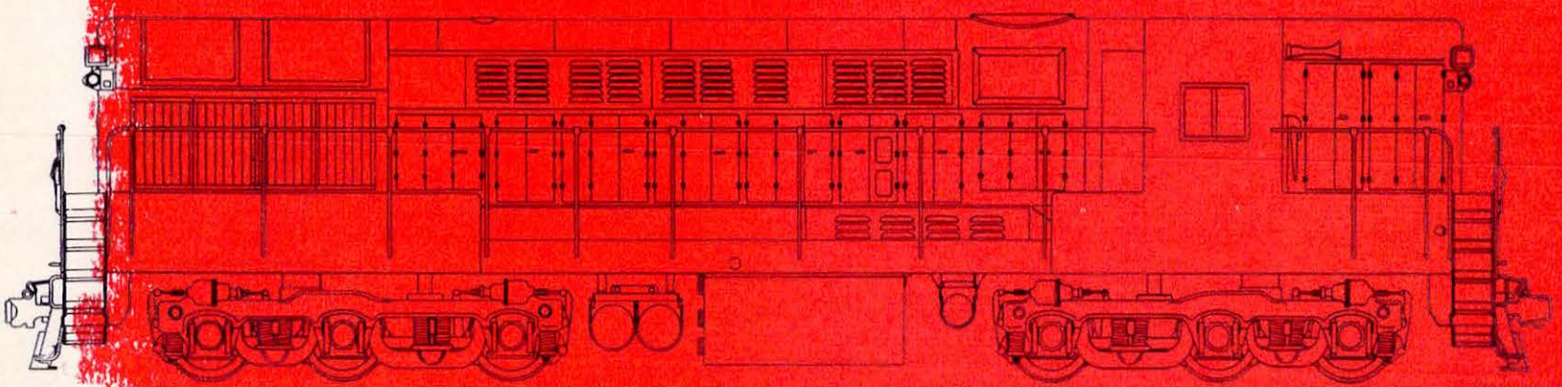
tomorrow

..one basic motive power unit

this is the Fairbanks-Morse

Train Master

the most useful locomotive ever built!



TRAIN MASTER *specifications*

MODEL ..... H24-66, 2400 H.P. Road Locomotive

TYPE ..... Whyte Symbol 0-6-6-0
AAR Symbol C-C

EQUIPMENT ..... 1-12 Cylinder Fairbanks-Morse Opposed-Piston Model 38D8-⅛

6-Heavy-Duty Traction Motors

4500 lb/hr Capacity Steam Generator

Roller Bearings 6½" x 12"

MAJOR DIMENSIONS

Over-all length inside knuckles	66′ 0″
Over-all width	10′ 3¼″
Over-all height above rail	15′ 0″
Width of power plant compartments	7′ 0″
Wheelbase each truck	13′ 0″
Wheelbase total locomotive	49′ 4″
Distance between truck centers	41′ 6″
Wheel diameter	42″

SUPPLIES

Fuel Oil	1800 gallons
Lubricating Oil	385 gallons
Engine Cooling Water	250 gallons
Train Heating Water	2400 gallons
Sand	48 cu. ft.

WEIGHTS

Total fully loaded	375,000 lbs.
Total on drivers	375,000 lbs.
Per axle	62,500 lbs.

PERFORMANCE

Starting Tractive Effort at 30% Adhesion .. 112,500 lbs.

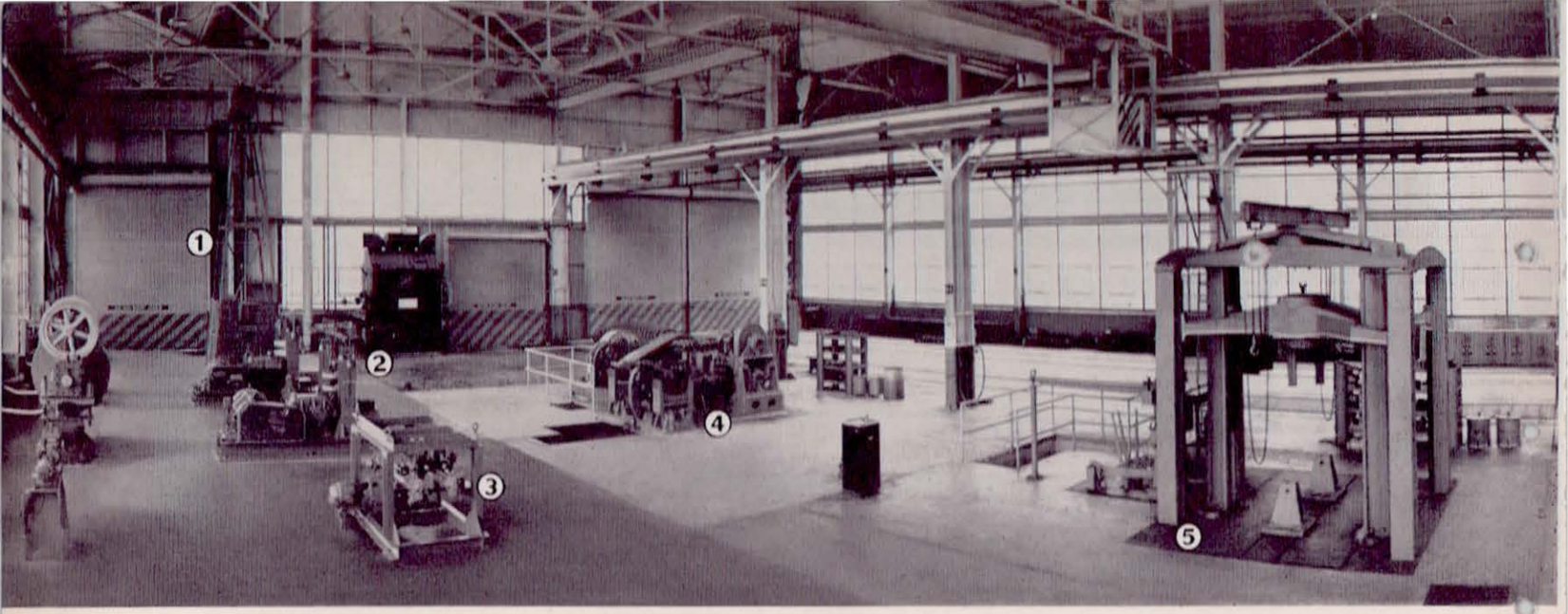
Maximum Continuous Tractive Effort	Pounds
Gear Ratio 68:15 (Max. Speed 65 MPH)	78,750
Gear Ratio 63:15 (Max. Speed 70 MPH)	72,900
Gear Ratio 62:17 (Max. Speed 80 MPH)	63,300

Dynamic Brake Capacity at Rail ..... 3,000 H.P.
Minimum radius of curvature ..... 212′ (27°)
Minimum radius of curvature, locomotive coupled to AAR 40′ 6″ freight car ..... 273′ (21°)

FAIRBANKS-MORSE

a name worth remembering when you want the best

DIESEL LOCOMOTIVES • ELECTRICAL MACHINERY • PUMPS • SCALES • RAIL CARS



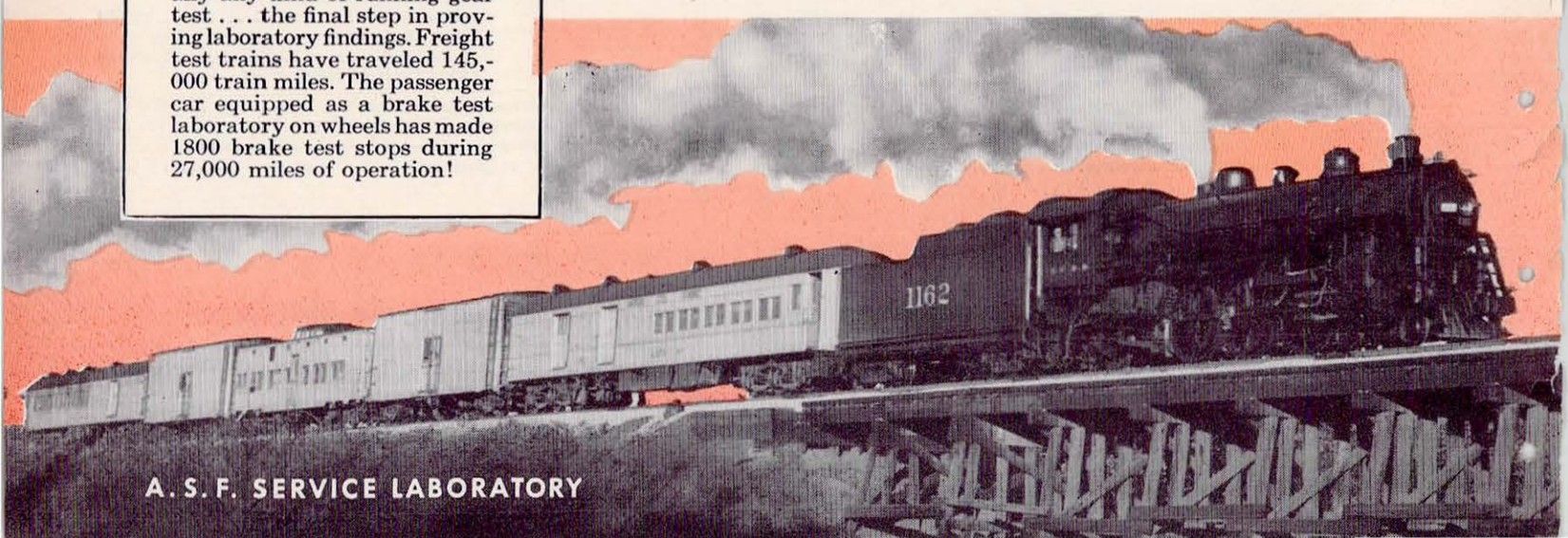
Which ASF testing duplicates your

Chances are that at least one of the unique machines you see above is at work right now . . . solving a running gear problem that may exist right on your own line. You're looking at an end-to-end view of the ASF Product Development and Test Laboratory . . . at Granite City, Illinois.

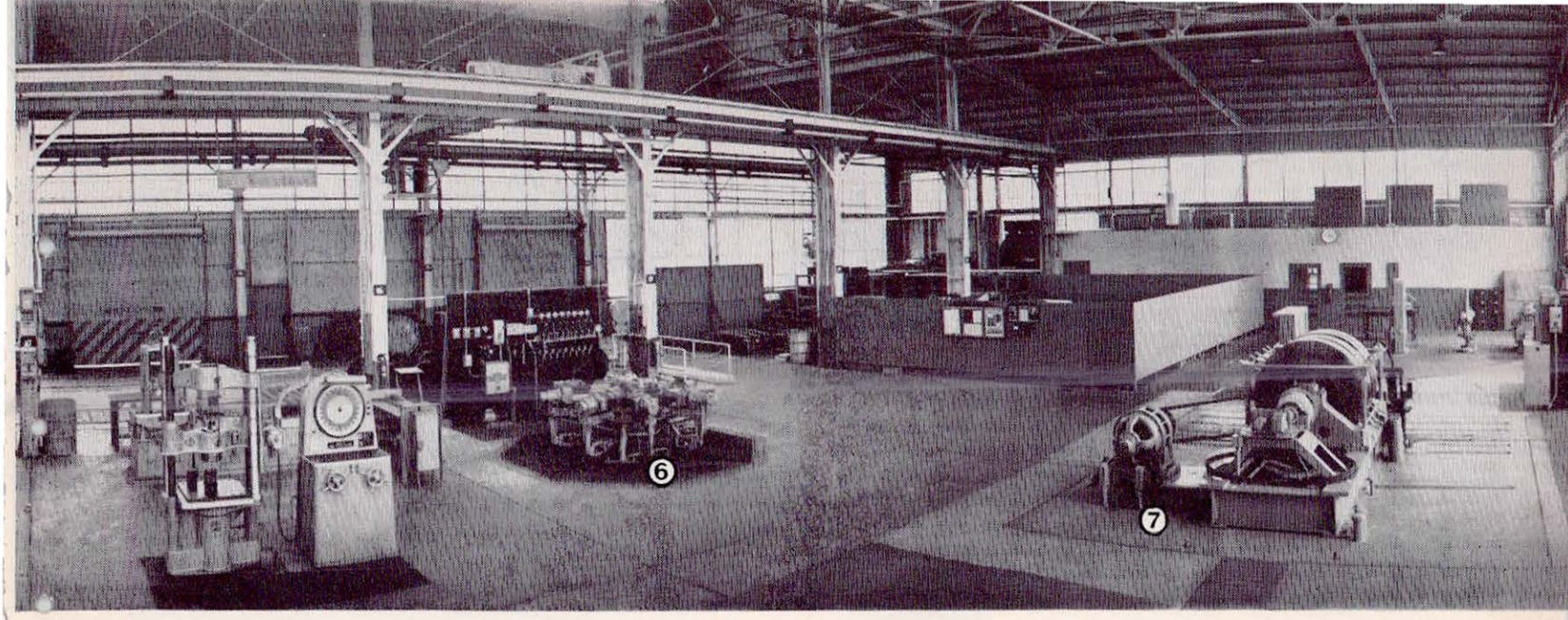
What's unique about these machines? For one thing, they recreate—and practically duplicate—actual train operation in a way that permits close range study. For example, a specially built ASF

DEVELOPMENTS IN RESEARCH ARE PROVED ON-LINE!

Here's the ASF Test Train. These cars are packed with recording instruments; specially equipped to make virtually any kind of running gear test . . . the final step in proving laboratory findings. Freight test trains have traveled 145,000 train miles. The passenger car equipped as a brake test laboratory on wheels has made 1800 brake test stops during 27,000 miles of operation!



A. S. F. SERVICE LABORATORY



Principal machines actively engaged in testing railroad products include: (1) Impact Hammer; (2) Brake Beam Fatigue Machine; (3) Lateral Oscillator for testing brake hangers, beam stabilizers, bushings and pins; (4) Side Frame Testing Machine; (5) one-million-pound-capacity Static Load Tester; (6) Dynamic 8-Stage Spring Tester; (7) Brake Testing Dynamometer, which can duplicate kinetic energy of 100 m.p.h. stops.

machine operating conditions?

Machine exerts vertical, transverse and twisting strains on Side Frames; literally pounds and twists them until they crack. Tests like this prove time after time that what is suitable for last year's speeds and loads is not necessarily going to be right for next year's railroad progress.

This special equipment is in almost constant use. And yet, despite its high degree of refinement we have always recognized that finding solutions to problems of design is one activity . . . but that final, undeniable proof of performance is another. That accounts for the thousands of miles of test runs with the ASF Test Train.

At first glance, such elaborate facilities for both laboratory and "on-line" testing might appear to be just a lot of extra trouble and added expense. But the *accomplishments* of this program—the ASF Ride-Control Truck being just one example—are insuring *continuous evolution* of all ASF Running Gear.

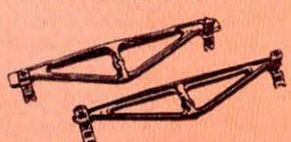
ASF

American Steel Foundries

410 North Michigan Ave., Chicago 11, Ill.

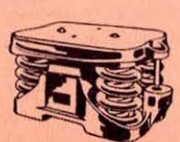
Canadian Sales: International Equipment Co., Ltd., Montreal, Quebec

Look for this MINT ⬡ MARK on the running gear you specify



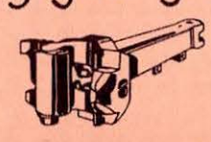
Cast Steel Brake Beams

Ride-Control Trucks

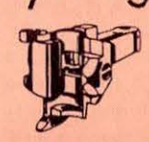


Ride-Control Packages

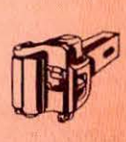
Simplex Snubbers



Tightlock Couplers

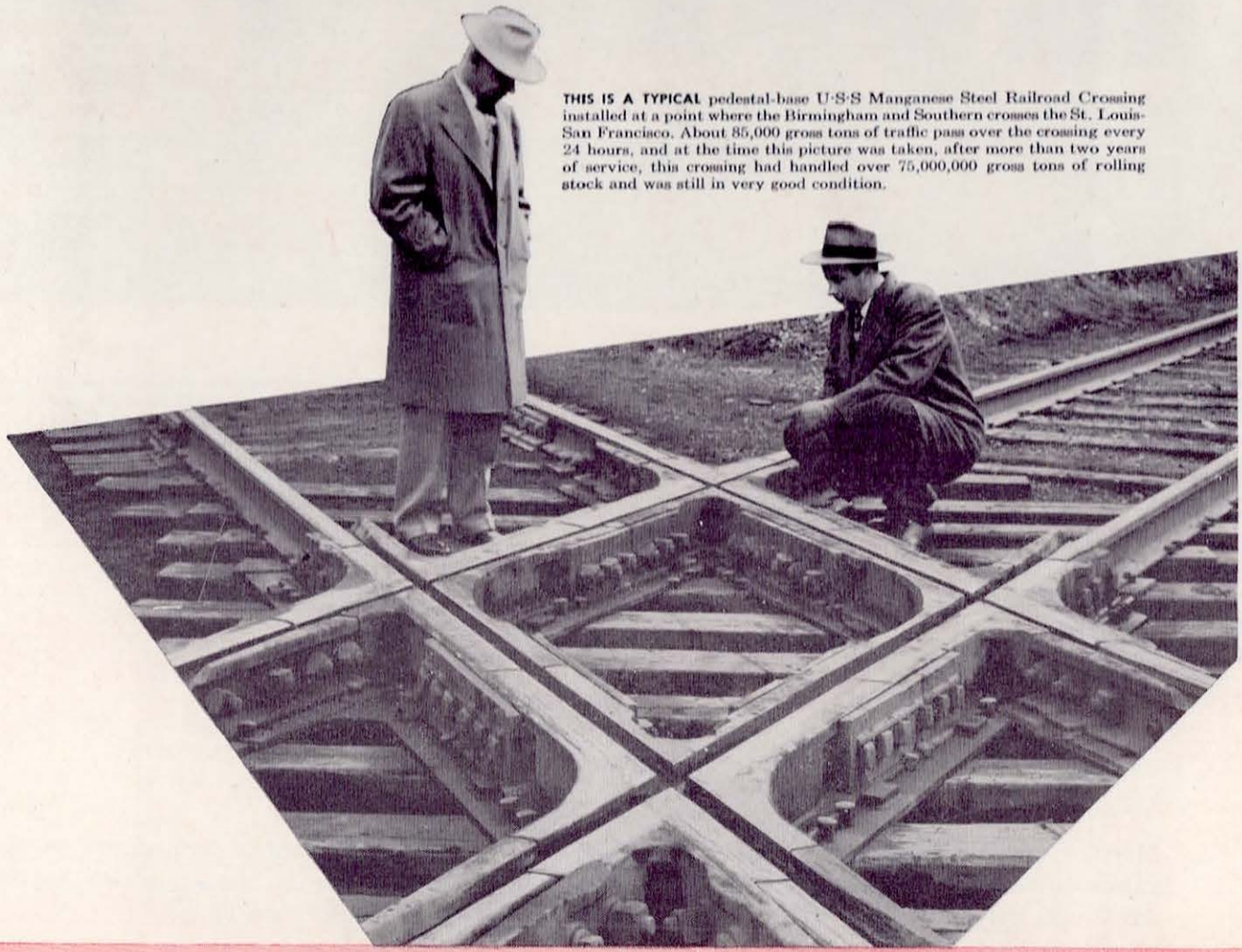


Type F Couplers



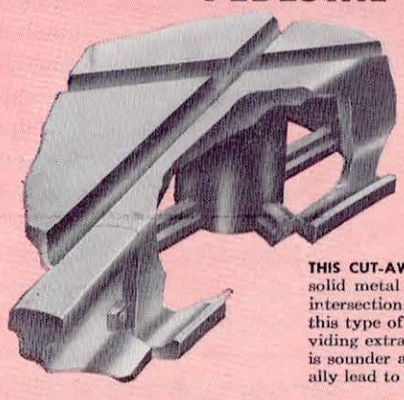
Type E Couplers

Cut your crossing maintenance costs

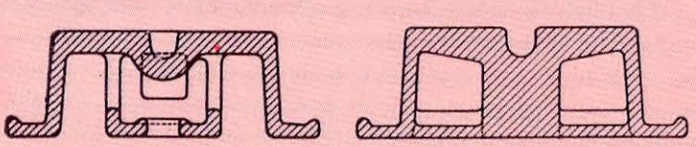


THIS IS A TYPICAL pedestal-base U·S·S Manganese Steel Railroad Crossing installed at a point where the Birmingham and Southern crosses the St. Louis-San Francisco. About 85,000 gross tons of traffic pass over the crossing every 24 hours, and at the time this picture was taken, after more than two years of service, this crossing had handled over 75,000,000 gross tons of rolling stock and was still in very good condition.

PEDESTAL BASE

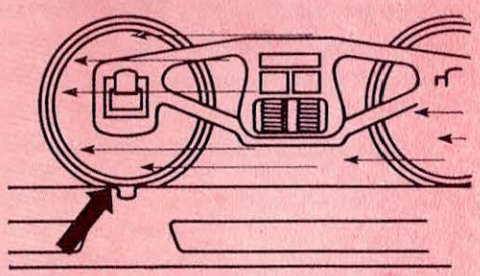


THIS CUT-AWAY VIEW shows the pedestal base of solid metal located directly under the crossing intersection. More liquid metal is used in casting this type of intersection; so, in addition to providing extra vertical support, the entire casting is sounder and freer of internal flaws that usually lead to failure.

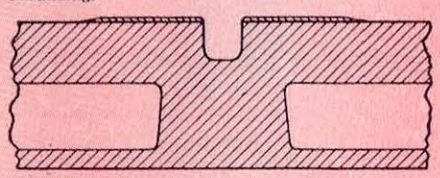


THESE TWO cross-section views of (left) an old-style intersection and (right) a pedestal-base intersection clearly show the extra vertical support provided by the sturdier pedestal-base construction. Ordinary intersections are hollow underneath the flangeway intersections at the point where they need the greatest strength.

DEPTH HARDENING



AS SHOWN ABOVE, the corners of ordinary manganese railroad crossings, which are hardened to only 200 Brinell in the shop, are pounded down about ¼" by the batter of train wheels and require extensive rebuilding.



ON DEPTH-HARDENED U·S·S Manganese Steel Crossings a 3/16" x 5" pad is cast integrally on each critical corner of intersections. This pad then is hammered to a hardness of 400 Brinell and ground to surface level before installation. This minimizes the damaging effects of wheel batter.

with stronger, more durable

U·S·S MANGANESE STEEL RAILROAD CROSSINGS

U·S·S MANGANESE STEEL RAILROAD CROSSINGS provide the extra strength and durability so necessary in crossings that must stand up under constant pounding from today's faster, heavier trains. In addition, these crossings require a minimum of maintenance, and, therefore, reduce costs and service interruptions.

Both improved design and improved metallurgical practice contribute to the outstanding performance of U·S·S Manganese Steel Railroad Crossings.

Unique Pedestal Base Assures Extra Strength and Longer Life

In these crossings, a pedestal base—a solid column of tough manganese steel—provides extra vertical support right where it's needed most: at the intersections, where wheel pounding is most severe. This pedestal base is many times stronger than the rib construction typical of ordinary crossings; and its extra support reduces deflections caused by wheel batter, a major cause of internal cracks that eventually lead to failure.

An improved method of casting adds additional strength and reliability. To minimize porosity and cavities characteristic of ordinary manganese castings, 5 to 10 times as much feed metal is used for these pedestal-type crossings as for other types, and the feed is much more closely controlled. This practice results in an improved casting.

Depth Hardening for Minimum Maintenance

U·S·S Manganese Steel Railroad Crossings are depth hardened to approximately 400 Brinell *before* leaving the shop. In other manganese crossings, track surfaces are hardened to only about 200 Brinell before installation—the pounding of train wheels is depended on for additional hardening. This wheel pounding batters down the corners of intersections, and these corners must be built up again by welding and grinding.

This needless maintenance and expense is eliminated with U·S·S Depth-Hardened Railroad Crossings. Before they leave the shop, all intersections are *hammered* to a hardness of 400 Brinell—the hardness required for modern railroad service—and ground to surface level. This assures maximum durability and resistance to wheel wear.

ADVANTAGES OF U·S·S MANGANESE STEEL RAILROAD CROSSINGS

- Longer life
- Greatly reduced maintenance
- Extra strength

U·S·S for All Your Trackwork

The improvements in design and metallurgical practice that are used in U·S·S Manganese Steel Railroad Crossings are typical of the extra care and effort that go into the making of all United States Steel Trackwork products; so specify U·S·S for all your trackwork requirements. We supply joint bars, tie plates, switches, frogs, and special track layouts, including crossings. In all of these the U·S·S label assures you of top quality and service.

USS TRADE MARK

UNITED STATES STEEL COMPANY, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

2-1493

UNITED STATES STEEL

He likes the Armco wheels

It's a railroader's job to pay attention to details. For example, there's a man who inspects wheels and trucks. He has to be up on his job. By the same token, the men who make the wheels have to know their business.

Armco Wrought Steel Wheels are made for present-day railroading. They are old—yet new! Old because they have 43 years' experience in wheel-making behind them; modern because they are produced to resist the severe braking under passenger cars and the complex stresses imposed by diesel locomotives.

For the last 17 years an intensive research program has been devoted to finding out what happens to wheels in service. The lessons learned from these tests are applied directly to the production of Armco wheels, from the melting of the steel to final heat treatment. Latest methods of quality control insure uniformity from wheel to wheel to offer you greater peace of mind.

You'll find it worth while to know more about Armco Wrought Steel Wheels. Just get in touch with our nearest District Office, or drop us a line at the address below:

Armco Steel Corporation

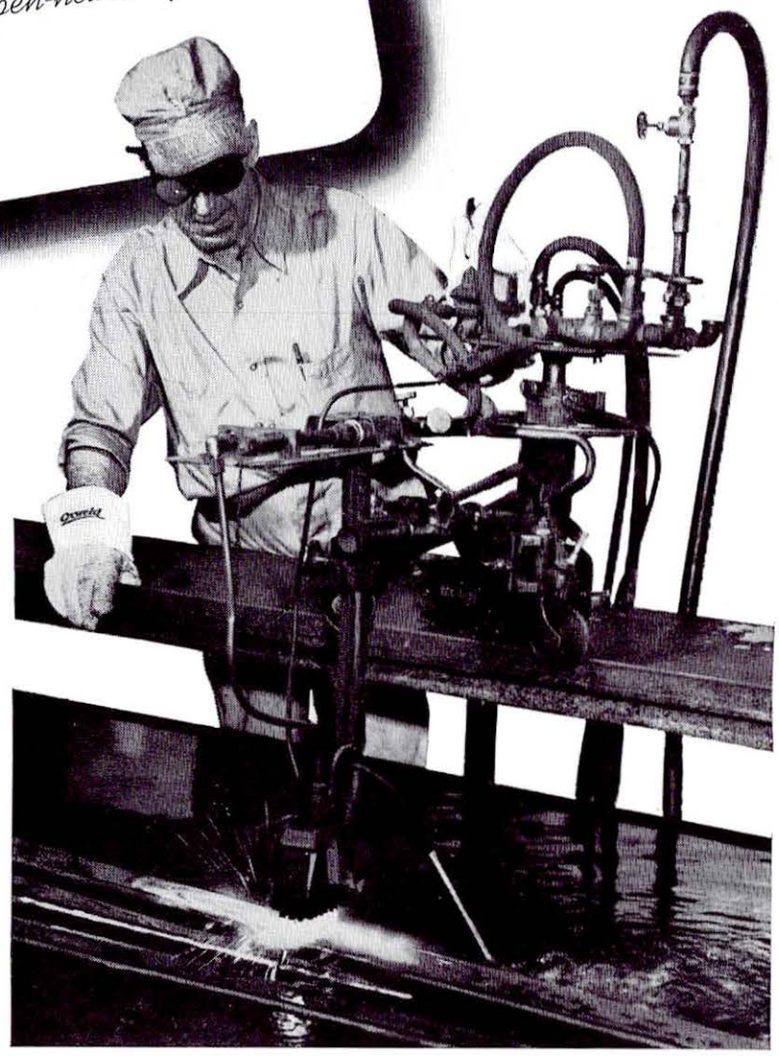
4682 Curtis Street, Middletown, Ohio • Plants and Sales Offices from Coast to Coast • Export: The Armco International Corporation

ARMCO

Memorandum to:

ENGINEERING AND PURCHASING OFFICERS

Major savings in track maintenance costs are being made by many railroads that have flame-hardened open-hearth frogs and crossings.



Railroad after railroad follows OXWELD'S procedures in constructing simple, efficient frog flame-hardening setups. Thousands of frogs that have been flame-hardened are now in track. These treated frogs are giving far longer service than unhardened frogs — five times longer service and more. This is impressive evidence of the value of OXWELD'S flame-hardening process in reducing maintenance costs on frogs and crossings.

Ask your OXWELD representative for details or write for Booklet F 7007 which gives complete information.

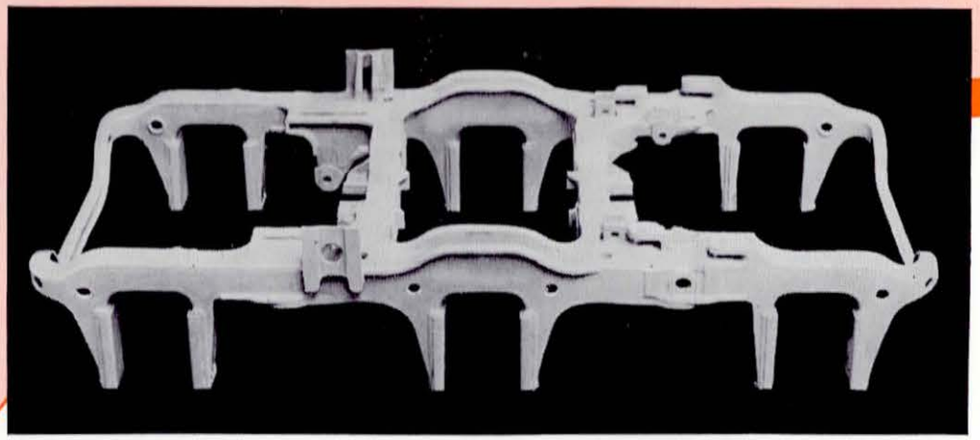
OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

OXWELD RAILROAD SERVICE

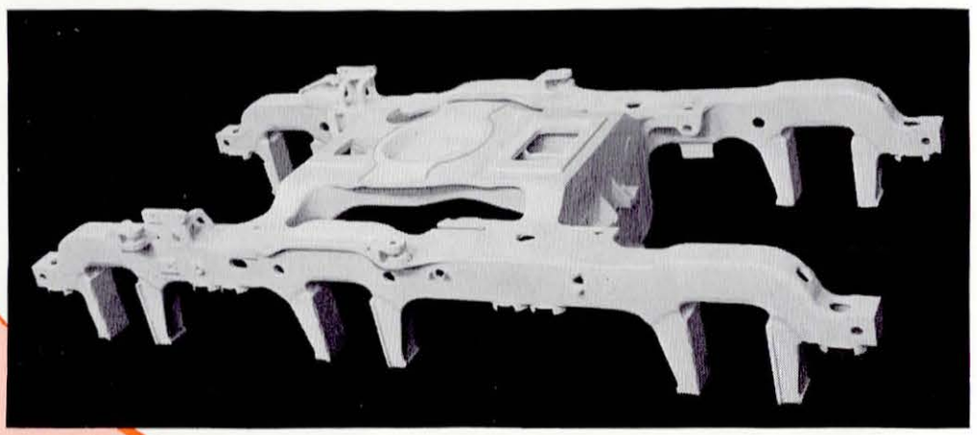
SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

COMMONWEALTH

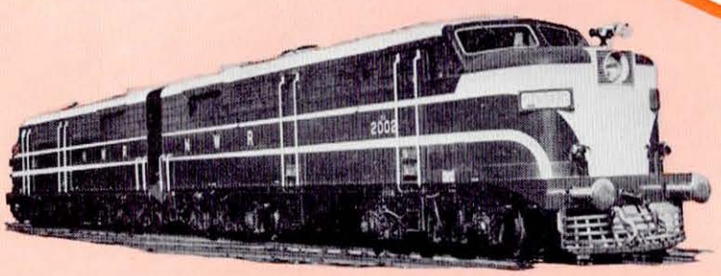
DIESEL LOCOMOTIVE TRUCKS...



Commonwealth
Motor Truck Frame
(2 motor type)



Commonwealth
Motor Truck Frame
(3 motor type)



3200 H.P. Freight and Passenger Locomotive
for North-Western State Railway, Pakistan

1600 H.P. Road Switcher for
Central Railway of Brazil

... In Service Throughout the World

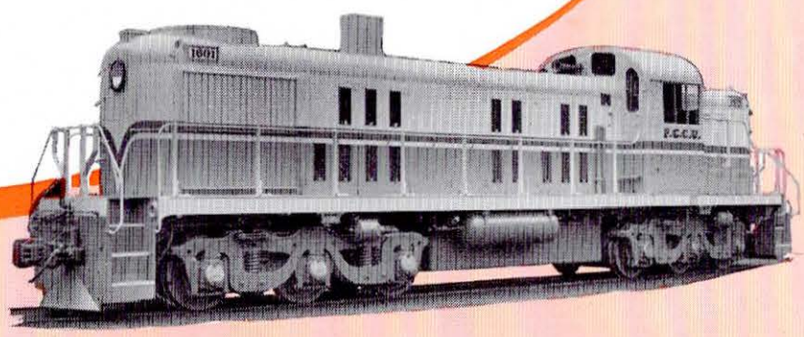
More and more Diesel-Electric locomotives for service throughout the world are being built with **COMMONWEALTH** Motor Trucks. In Australia, Algeria, Brazil, Pakistan and Uruguay, as well as in North American countries, these trucks are materially helping to reduce locomotive maintenance costs and "out of service" time.

COMMONWEALTH One-Piece Cast Steel Truck Frames and Bolsters provide minimum weight with exceptional strength for rugged diesel service. Throughout the world performance has proven the outstanding dependability and economy of **COMMONWEALTH** Motor Trucks in every type of diesel locomotive operation. For all types of service specify **COMMONWEALTH** Trucks.

GENERAL STEEL CASTINGS

GRANITE CITY, ILLINOIS

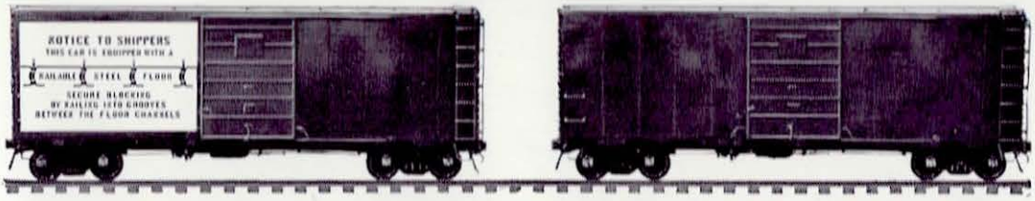
EDDYSTONE, PENNSYLVANIA



1600 H.P. Road and Switching Locomotive
for Central Railway of Uruguay

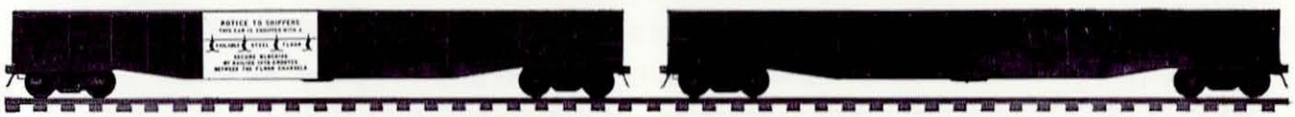
1600 H.P. Road Switcher
for New South Wales Government Railways

Q. Which car spends less time on the rip track?



Boxcars:—Requirements for boxcars are presently exceeding the available supply . . . shortages are most acute for the *better grade box.**

Q. Which car brings in greater revenue?



Gondolas:—Severe shortages are being reported in all sections of the country . . . a considerable tonnage of steel has been piled awaiting cars.*

A. The car that has...

Nailable Steel Flooring!

because... *The car is stronger.* Solidly joined to the sides and underframe, NAILABLE STEEL FLOORING becomes an integral part of the car structure, greatly increasing the ability to withstand dynamic service.

The floor is stronger. Made of heavy gage N-A-X HIGH-TENSILE steel, cold-formed into channels, N-S-F provides the extra strength needed to eliminate break-through of heavy lading—and withstand the concentrated loads and abrasion of heavy lift-truck operation in boxcars. In gondolas, N-S-F provides a strong, double-duty floor that withstands heavy impact from magnet or mechanical loading and is also nailable for blocking finished freight.

That means less maintenance and time lost on rip tracks and more time in revenue-producing movement. Let us help you figure the operating economies you can realize from these values.

PATENTS PENDING 52-SF-11A

GREAT LAKES STEEL CORPORATION

STEEL FLOOR DIVISION • Ecorse, Detroit 29, Michigan

PRODUCER OF N-A-X HIGH-TENSILE STEEL

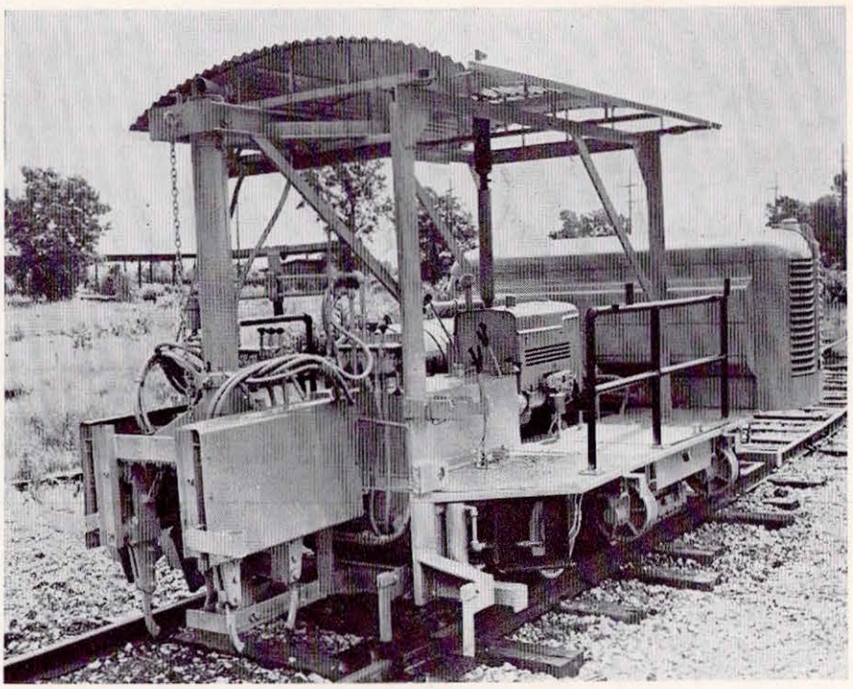
NATIONAL STEEL CORPORATION

Look for this stencil . . .

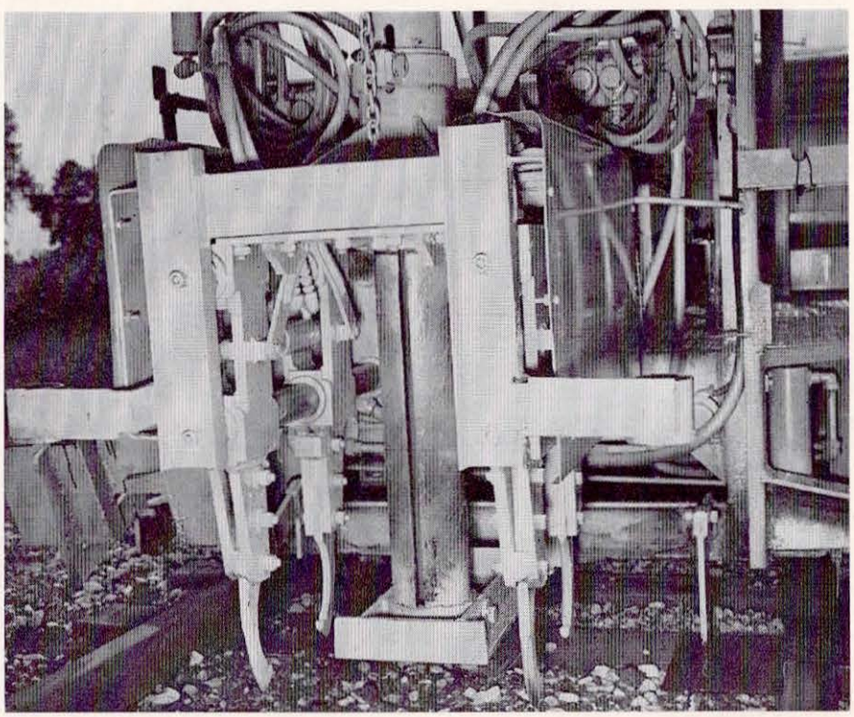
*Bulletin No. 89, 10-20-52, Assn. of American Railroads Car Service Division.

The Spacer-Nipper-Spiker

The Pullman-Standard Car Manufacturing Company, Chicago, has recently developed an experimental model of a tie spacer-nipper-spiker. This machine, which is now working on a large eastern railroad, is a self-propelled single unit which combines all of the machinery necessary to (1) space the tie at the desired interval; (2) hold the tie firmly against the base of the rail; and (3) spike it.



The new machine has a running speed of 25 m.p.h. and has a powered set-off mechanism.



Close-up view of the claw-like spacing head at the front of the machine.

It is said to be the first maintenance-of-way machine to take advantage of the electromagnetic track brake used so successfully on the modern electric street car.

These brakes may be applied to the track to give added holding power during the period when the machine is pulling a tie to a new position in the track, thus providing much greater pulling power than would be obtainable with the weight of the machine alone.

Measured Stops

The car also has a special metering device for measuring the intervals at which the unit stops as it works down the track; this can be preset to handle any spacing requirements. A hydraulically operated claw-like spacing head then positions the tie at the predetermined point and holds it firmly against the rail while it is being spiked.

Four standard spike guns can be used, but normally only two would be used for the tie-spiking operation. Each tie-spiking gun is controlled from the spike-man's platform over each rail, thereby eliminating time and effort spent in dragging the gun and hose from tie to tie.

Push-Pull Control For Toilets

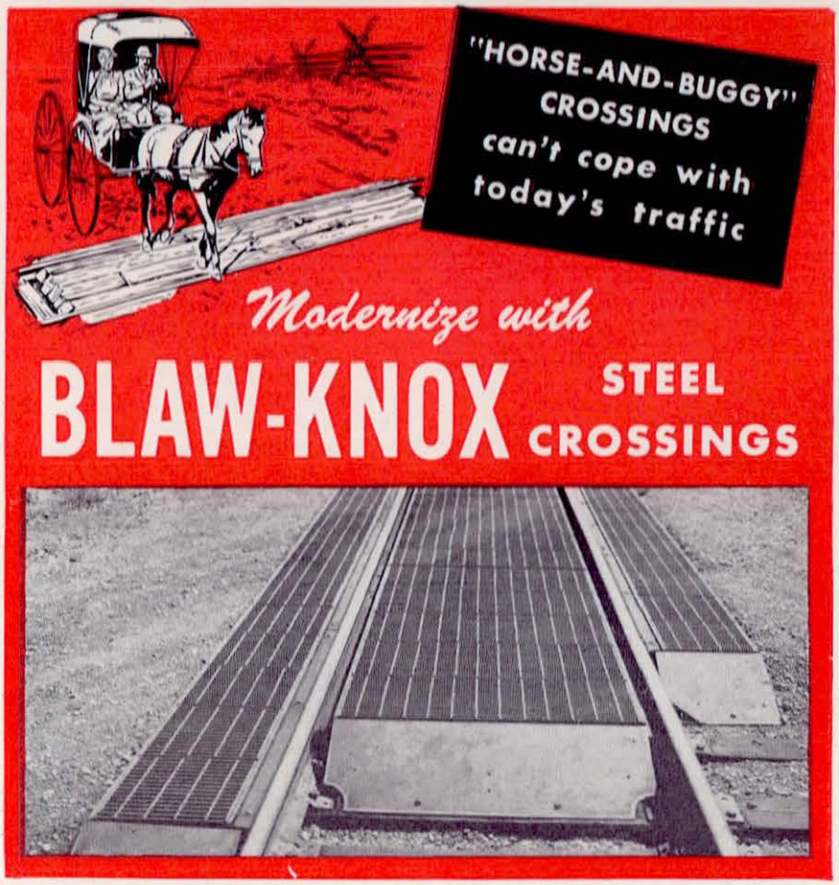
This product is applicable to toilet installations in new and existing railway coaches and sleeping cars where it is desirable to eliminate the older push-rod arrangements which operated flush valves from externally mounted hand levers or pedals.

The control is adaptable to difficult contours.

This unit transmits mechanical motion from a convenient point of application to a remote point of operation.

Basic elements consist of a moving member or linkage enclosed in either a rigid or flexible casing, or combination of both. Four types of operating mechanisms are available: a rotary handle, a hand lever, a pedal and button.

A wide variety of fittings and attachments are available with this device, made by Simmonds Products, Inc., Tarrytown, N.Y., in many types of applications.



Where other crossings soon deteriorate from the battering of heavy trucks and automobiles, Blaw-Knox Steel Crossings show little sign of wear. Made from electroforged steel grating, they last as long as the rails themselves.

The open mesh construction admits sun and air . . . prevents rotting of ties and foundation supports. Panels are easily removed and replaced when tamping is required.

It costs practically nothing to keep your crossings in top condition when you install Blaw-Knox Steel Crossings. And good crossings foster public goodwill.

Write for Bulletin 2395 describing railroad applications of Blaw-Knox Grating.

DISTRIBUTORS OF BLAW-KNOX GRATING FOR RAILROAD CROSSINGS

East of the Mississippi—Railroad and Industrial Products Company, 332 South Michigan Avenue, Chicago 4, Illinois.

West of the Mississippi—Brodhead Steel Products Company, 17th & Wisconsin Streets, San Francisco 10, California.

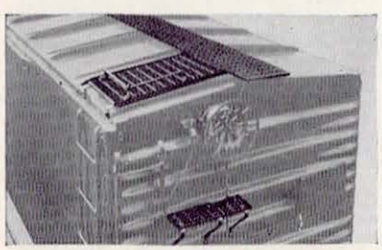
Canada—Central Bridge Company, Trenton, Ontario.

Railway Equipment and Grating Department

BLAW-KNOX COMPANY

Blaw-Knox Division

2044 Farmers Bank Bldg.
Pittsburgh 22, Pa.



BLAW-KNOX RUNNING BOARDS AND STEPS—are constructed from electroforged steel grating—as are Blaw-Knox platforms, diesel ramps, battery boxes, battery shelves and fan funnel grills. Write for Bulletin 2395.

BLAW-KNOX *Electroforged*® STEEL CROSSINGS, RUNNING BOARDS, STEPS

Current Publications

BOOKS

DuPont—the Autobiography of an American Enterprise. 138 pages, illustrations. Charles Scribner's Sons, 597 Fifth ave., New York 17. $5.

"This is a book without an author, just as it is a story without an end. In the summer of 1802, masons laid the first stones of a small mill on Brandywine creek, near Wilmington, Del. Directing the work, his drawings in hand, was a young refugee from French dictatorship, recently arrived in America. The mill was his stake in the future of his adopted land. From that day forward, the venture was to be known by his name: E. I. du-Pont de Nemours. The century and a half that followed saw both venture and nation expand far beyond the narrow borders that confined each in 1802. This growth has been, in each instance, a matter of cause and effect. DuPont grew because the growing nation's needs and its free traditions encouraged progress. The nation grew because DuPont, and a thousand others, were contributing the seeds of growth that germinate in daring risk and innovation." The above is quoted from the foreword to this very beautifully produced story of E. I. duPont de Nemours & Co. published in commemoration of the 150th anniversary of the founding of the company on July 19, 1802. A listing of the chapters indicates the scope of the book. They are: E. I. duPont de Nemours comes to the new world; a new business on the Brandywine; the company takes root, starts to flourish; duPont marches with the nation; new horizons beyond the Brandywine; diversification keynotes a new day; duPont and World War I; an album of leadership; a generation of peace; the company goes to war again; the post-war expansion program; the company today.

Manual of Transportation Law, by Frank M. Cushman. 408 pages. The Transportation Press, P. O. Box 381, Dallas 1, Tex. $6.

This manual has been designed for the practical traffic man who needs to know more about transportation law in his daily work and for the student of this subject. The author explains the development of regulation in general and the regulation of transportation in particular since the early days of the Constitution. From this essential background the pattern of regulation is brought down to date. The national transportation policy; definition, scope and interpretation of interstate commerce; duties of common carriers; inequality of treatment; the shippers' right to route; and tariff publication are discussed, as are the Reed-Bulwinkle amendment, motor carrier regulation, water carrier regulation and freight forwarder regulation. Five appendices cover terms and conditions of the transportation contract as included in the approved bill of lading, formal complaints, the development and completion of investigation and suspense action, important and applicable elements of evidence and general rules of practice. Some 476 leading decisions affecting the Interstate Commerce Act are discussed.

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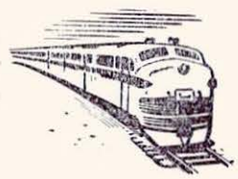

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Benchmarks and Yardsticks

THAT WAS FRANK TALK by President T. D. Beven of the EJ&E about the widespread disregard of Rule G, which we reported in our November 3 issue. A railroader in Texas writes as follows about it:

"I'd like to hear the opinions of some of the chief operating officers on Mr. Beven's recommendation that employees refuse to work with fellow-employees who are too drunk to perform their duties. I suspect most operating officers would charge an employee with desertion who would refuse to work under such conditions. Maybe there are executives who share Mr. Beven's opinion, but all the supervisory officers I know, without exception, take a very dim view of such drastic action. All I can say is, I wish I'd asked the EJ&E for a job when I was younger."

Drinking on duty—or (almost as bad) going on duty more or less "under the influence"—is obviously not getting the drastic disciplinary attention it invariably received in times gone by. There's not much use discussing why this has happened—unless such inquiry will point to a cure.

There's no doubt that the indulgent attitude of adjustment board referees to flagrant drunkenness on duty has taken the heart out of many supervisors who used to be stern disciplinarians on all safety violations—and especially on Rule G. On the other hand, isn't it possible that some supervisors are too tolerant of waywardness regarding Rule G, because their own consciences about adherence to this rule may not be altogether clear?

We're still paying for the folly of prohibition—which was just one more case of the government trying to take over individual prerogatives, with disastrous results. Prior to prohibition, over-indulgence had become distinctly less and less respectable, but prohibition suddenly made a slightly risky and hence amusing game of it; and attitudes were formed which it may take generations to alter. Maybe the Alcoholics Anonymous people could do something about the situation—except, of course, for the fact that a railroad employee who drinks on or near duty can become a serious safety risk long before he ever gets bad enough off to be a likely candidate for AA.

If there are other railroaders who feel like our friend from Texas does, we'd like to hear from them—and, as well, from those who may disagree with him. That's what this space is for—to try to discover some of the standards a fellow doing railroad work will find helpful to him. Not just the technical standards of a particular job—but standards of behavior, of belief, of association, too.

J. G. L.

A man with a hate

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RAILROAD VIEWPOINT IMPRESSES STATE REGULATORS

One of the most important things that has ever happened to the railroads occurred in Little Rock week before last, when the state regulators voted to accept and put into effect the recommendations of their special committee on the "passenger deficit problem" (as reported on pages 67-71 of last week's *Railway Age*). Their forthright action was probably the most important recorded change in the attitude of regulators toward the railroads—as distinct from changes in the law under which they operate—in the whole history of regulation. Their action also refutes absolutely the argument that the railroads' campaign for equal treatment is a waste of time.

Not only did the representatives of the state regulatory commissions confess the defects of their own past policies, but they attacked state laws which hinder realistic regulation and promote labor featherbedding, and bluntly admonished the brotherhoods to quit practices which heighten the cost of running passenger trains. They accepted almost without exception the analysis of the reasons for the passenger deficit which the railroads have been talking about ever since the end of the war —subsidy of competitors; inability to take off "the clunkers"; the commutation problem; inadequate compensation for carrying head-end traffic; "sticky" labor agreements; state "full-crewing" laws; and the effect of the federal transportation tax in encouraging private transportation. In fact, the list of reasons given in the regulators' report, although arrived at independently, is almost exactly the same as the factors listed in *Railway Age's* lead editorial in the "Passenger Traffic Number," May 19, 1952.

A Mighty Change

When it is considered how adamant too many state commissions have been, right up to the present, in denying the railroads flexibility, the adoption of this report may properly be characterized as breath-taking. It is a reversal in the historical process not dissimilar to the conversion of Charlemagne. The amazing aspect of the action taken by the National Association of Railroad and Utilities Commissioners is that it formally recognizes the disabilities under which the railroads have had to operate; that it says specifically what the state commissioners ought to do about that situation in the future; and, further, that it puts the regulators on record as favoring changes in any laws which tie their hands in carrying out their new policies.

Thus, one of the recommendations virtually *directs* each railroad to seek authority to discontinue any train which is currently producing revenues "substantially less than direct operating expenses." At the same time it establishes the policy that regulatory bodies "should adhere vigorously to the principle that, where the service cannot be made compensatory, its abandonment should be permitted." Just in case any commission should balk, or quibble about figures, the report favors adoption by all the states of a standardized form for filing applications for service curtailment—in the interest of "maximum expedition." Also, to deal with undue restraint on the exercise of good judgment, the report urges the association to be on record as favoring amendment of state laws "unqualifiedly prohibiting discontinuance of the last passenger train on a line of railroad."

The report is in no way vague about the trains which ought to be taken off. It counts them and identifies them as the "key to the entire passenger deficit." For the commissioners' acceptance of this fact, the railroad industry has to thank the committee of its own accounting officers who undertook "perhaps the most comprehensive study of its kind ever undertaken by the railroads"—the detailed operating results—during the test month of May 1951—of some 1,200 trains which the railroads selected as those which failed to pay even direct expenses. It was a monumental task to collect the data, to agree upon the thorny differences in interpretation of data between individual roads, and to collate the whole into a usable, understandable, acceptable summary. The railroads' task was done so well that the commissioners' report definitely refers to the trains so listed as the kind which the regulators ought to allow the railroads to discontinue.

The list of 1,200 does not, of course, cover all the trains which lose more "cash" than they earn. Omitted from it deliberately were all commuter services, many runs of less than 50 miles, and trains which the operators believed it unwise or unfeasible to withdraw—many of which, as the report itself points out, are also

losing money. The recommendations of the report impose no bar against their discontinuance on the same basis as the chosen 1,200 trains.

User Charges Advocated

Another heart-warming point in the utilities commissioners' action is their unqualified acceptance of the railroads' complaint that the subsidization of road and air transport is a prime cause of the railroads' passenger deficit. Their report recommends that the general solicitor of the N.A.R.U.C. appear before "appropriate congressional committees" to (1) inform the legislators how subsidies affect railroads' passenger operations—and the public; (2) seek the elimination of the 15 per cent federal passenger transportation tax; and (3) ask for "fair" competition of parcel post with railway express. It goes on to ask that the association record itself as favoring "compensatory" user charges on all forms of commercial passenger transportation using public facilities. Unlike half-hearted government and civic body pronouncements on the subsidy question, the commissioners' recommendation is without "ifs" or "buts"; it urges, in effect, "make 'em *all* pay what is right."

Finally, the commissioners' report is a frank criticism of the effect of union agreements and state crewing laws in building up the cost of railroad passenger transportation beyond reasonable limits. It says the association should definitely favor changes in laws which stand in the way of the employment of minimum train crews —"consistent with safe operation." It urges management and brotherhoods to make drastic changes in operating practices.

This paper has, for years, expressed the opinion that, the more successful the railroads are in getting the regulators' constituents "off their backs," the more likely they are to get favorable decisions. The report implies practical sanction of this point of view in its resumé of the manner in which some railroads have "gone beyond a mere statistical presentation of their cases" in an effort to "mitigate the resistance of the public" and thus "make it easier for the commissions to take affirmative action on abandonment applications." Both "missionary" delegations into affected communities and "simplified and colorful showings of the deficit problem" in place of "technical niceties" have the apparent applause of the report's authors.

The state commissioners have wrestled manfully with consciences pricked by data skilfully and honestly supplied them by the railroads. With their changed attitude, the railroads may expect a radically changed climate for doing business. At the same time, the obligation to help square the regulators with "the folks back home" remains as important as ever.

PRODUCT SPECIALISTS FOR THE TRAFFIC DEPARTMENT

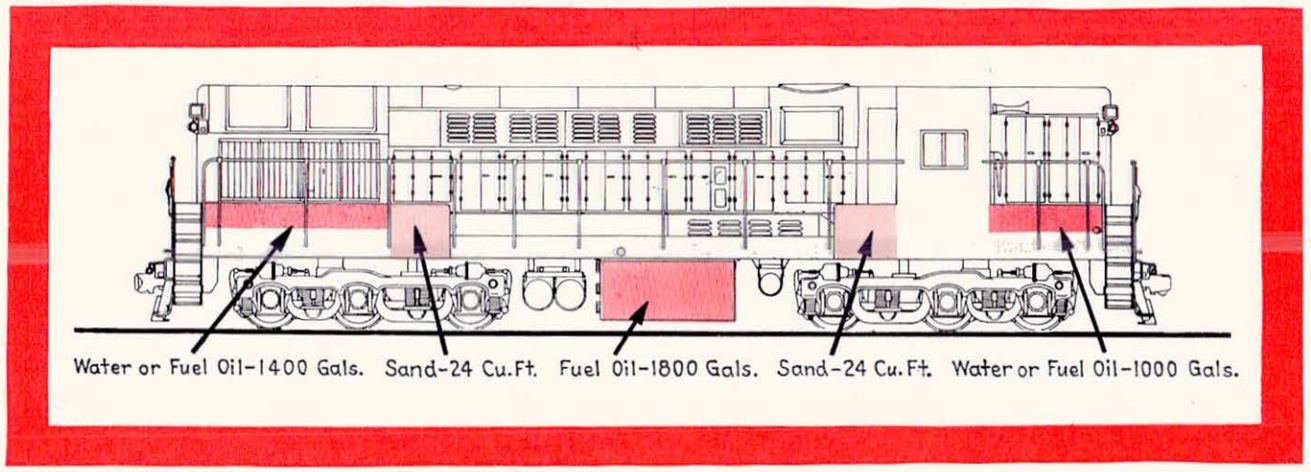
In this space a few weeks ago it was observed that most railroad customers know a great deal market-wise about the transportation business, but that the railroads have few people who are comparably expert in the business of most of their customers. The president of a large midwestern railroad advises us that:

"The widely practiced geographical system of territory assignments, it seems to me, is not the proper approach to present-day railroad sales problems, because it places too much emphasis on geography and not enough on the detailed wants and needs of different kinds of shippers. The more I mull over the problem the more I feel that sales effort should be directed toward the end of supplying the individual shipper's needs, rather than the artificial goal of geographical coverage —and that leads to the need for greater specialization on the part of the individual salesman. Yet geographical coverage cannot be completely neglected because the railroad must maintain local points of contact."

By way of experiment, this railroad president's idea is being given a trial in the traffic department of his railroad through the appointment of an oil and petroleum traffic-solicitation expert. The man has no territorial limitations, but is confined strictly to handling oil and petroleum matters. In the six months since his appointment, this man has brought about a substantial increase in the volume (in relation to production) of petroleum traffic moving over this railroad. This has come about, the management believes, because this "specialist" is a highly-trained rate man, thoroughly and intimately familiar with all the tariffs concerned with petroleum traffic; and is experienced in "the making of rates that will attract traffic and produce a profit for the railroad." He has made the specialized service, equipment and rate needs of this industry his full-time interest.

Of course, solicitation "product experts," working on a systemwide basis, can never completely replace a geographical sales force—the president of this railroad believes—because a railroad must still have representatives from the sales department strategically placed on all parts of the railroad to provide shippers with essential local contacts. But local contacts can be made more effective, if the territorial solicitation forces are provided with a "supporting corps" of experts on such types of traffic as are likely to respond to specialized study.

In even a short space of time, this limited experiment by one railroad suggests that the idea of the "product specialist" has definite merit.



The location of supplies on the "Train Master," showing the tanks on either end which may be used for 2,400 gal. of water or to increase fuel capacity to 4,200 gal.

The "Train Master" . . .

New Locomotive Packs 2,400 Horsepower

Fairbanks-Morse Universal hood-type design, with six motors, is operable in either direction for freight and passenger work and for switching movements

On November 20 Fairbanks-Morse unveiled plans for the "Train Master"—a six-motor, 2,400-hp. hood-type locomotive that will handle traffic loads for which one conventional 1,600-hp. unit is not quite adequate but for which two such units constitute an overinvestment in motive power.

The hood-type design was chosen for both operating and maintenance reasons. As the "Train Master" can operate in either direction with good visibility, it is equally capable of handling everything from main-line passenger and time freight runs to local freight and transfer runs which entail a large number of switching moves. The hood-type construction further results in maximum accessibility of the power plant and associated equipment.

Powered by a single 12-cylinder F-M opposed-piston engine, the "Train Master" provides the horsepower, transmission capacity, weight on drivers and general design features to fit it for any class of service. All of the appurtenances and accessories required for all classes of service can be applied to any one unit; it is not necessary to substitute one feature for another. Despite this flexibility in design, the overall length is only 66 ft.

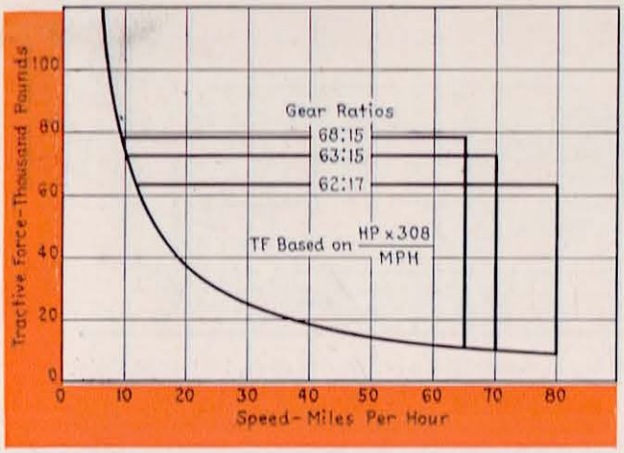
The increase in horsepower and train-handling capacity is matched by comparable increases in other features. The tractive force is 50 per cent greater than in 1,600-hp. four-motor freight units, permitting the "Train Master" to handle 50 per cent more train than a four-motor unit will handle on a given grade. The greater horsepower rating of this locomotive over others of the six-motor, six-axle arrangement makes it available for more runs per day because it can handle heavy drags with less elapsed time between terminals.

The 1½:1 ratio has been carried out in provision for operating supplies. Fuel tank capacity versus weight of trains handled is the same as or better than conventional 1,600-hp. freight locomotive units. Sand capacity is slightly more than 50 per cent greater. The dynamic brake capacity of 3,000 hp. at the rail is 50 to 100 per cent greater than that available on 1,600-hp. four-motor units.

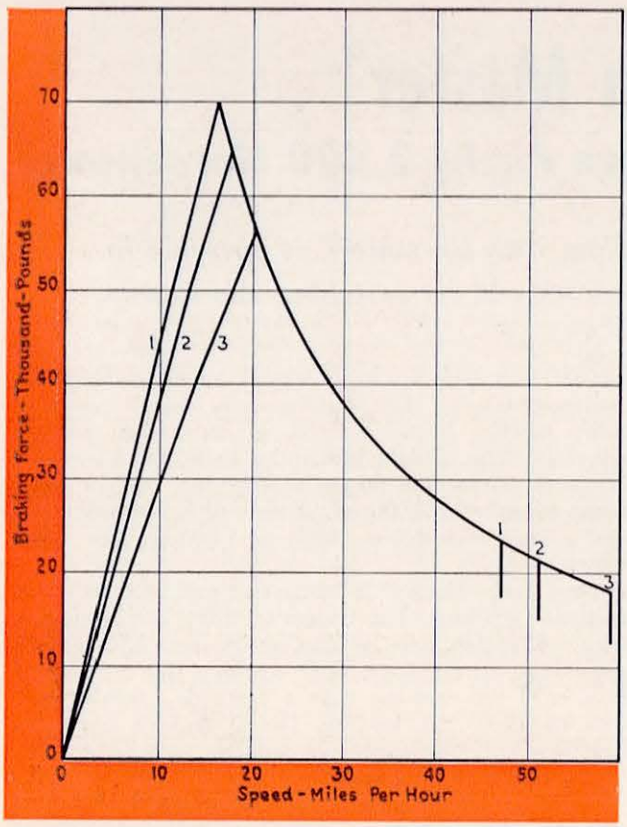
The "Train Master" is in no way restricted to heavy main-line trackage. The Cooper's bridge loading factor, with a 62,500-lb. axle loading, varies from E50 to E45, depending on the span. Rail stressing due to vertical load is 11 per cent less than a four-axle 1,600-hp. unit with the same axle loading. The locomotive alone can negotiate a 27-deg. curve; in multiple or with a train, it can take a 21-deg. curve.

So that this locomotive can be available for passenger service, either as a full-time assignment or as part-time duty to handle special passenger-train movements, the design provides for the installation of a 4,500-lb.-per-hour Vapor steam generator. This capacity is sufficient to heat a fifteen-car train at zero temperatures. The high steam-generator capacity has been matched with a feed-water tank capacity of 2,400 gal. on each unit, which is sufficient water to supply this steam generator operating at full capacity for over four hours, or more than long enough to cover the distance between existing water-supply stations.

Train-heating water capacity is provided in two tanks. The first, of 1,000-gal. capacity, is installed on the forward end platform and forms the floor for the boiler compartment as well as the outside walking surfaces. The second, of 1,400-gal. capacity, is placed on the rear



The "Train Master" has the horsepower, transmission capacity and weight on drivers to fit it for any class of service.



The dynamic brake utilizes fully the capacity of the traction motors, dissipating 3,000 hp. at the rail over the braking range.

end platform and forms the outside walking surfaces at that end, as well as the floor of the cooling section. The end platform locations were selected for equal weight distribution and for low bending moments in the underframe when fully loaded. The two tanks are connected by a 4-in. pipe carried in the underframe assembly, and the steam generator feedwater pump suction line is connected to the 4-in. pipe near its mid-point. With this arrangement the steam generator line will be fully covered by water when the supply is low and water tends to flow to one tank due to grade or rapid deceleration.

The water tank system is filled through connections on the forward tank. This tank is vented to atmosphere through a check which prevents overspill during the interval between reaching full level in the forward and rear tanks. The rear tank is vented to atmosphere without a check in the line; therefore overspill from the rear tank occurs when both tanks are full.

Water level is indicated by a direct-reading float-type dial face gage mounted in the forward tank and visible inside the locomotive. The tanks are fitted with washout plugs for flushing between each set of baffles in one direction.

When the "Train Master" is equipped for freight service only, the water-tank space may be utilized in one of two ways. Normally, a frame is used to support the walkway, superstructure and equipment above these two locations, with the space within the frame reserved for placement of ballast required for the total weight desired. In the event that an unusually large fuel capacity is desired, the water tanks can be fitted as fuel tanks and connected to the main 1,300-gal. fuel tank, giving a total fuel capacity of 4,200 gal.

The train heating installation includes a 2½-in. welded steam trainline, 2½-in. ball-joint steam-line end connectors and standby connections for steam heating the engine cooling water. A steam trainline pressure gage is visible from the fireman's position.

Parts Interchangeability Maintained

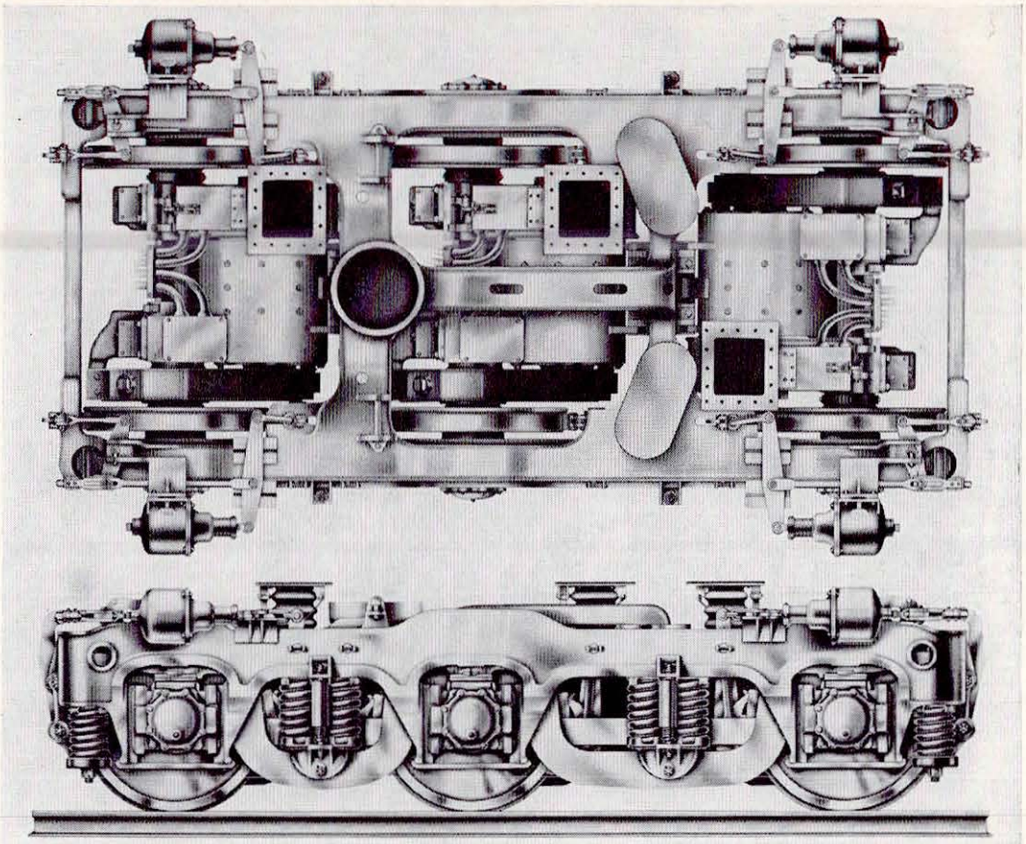
Care has been taken to maintain maximum interchangeability of parts between this new locomotive and existing Fairbanks-Morse models which it supplements. This locomotive uses the standard F-M 2,400-hp. power plant and accessory equipment and will, with few exceptions, utilize the same accessory equipment and control elements now furnished on F-M units.

The general arrangement is such that the short hood, or boiler end of the locomotive, will be the forward end for maximum visibility. This is optional, however, and the reverse arrangement of cab control can be provided, as can two control stations for operation in either direction in high-speed service in high-traffic-density areas. Positive cab ventilation is provided, so that with doors and side windows closed, fresh air is drawn into and circulated through the cab before being drawn off into the engine room by induced suction. All air drawn into the engine compartment is filtered through 14 removable 20 in. by 20 in. by 2 in. oil-coated impingement-type panel air filters.

The ready-to-run weight is 375,000 lb. equally distributed to the six driving axles for adequate adhesion to utilize the full power of the "Train Master." This weight includes ballast in varying amounts, as shown by the following examples of combinations of equipment installed:

Locomotive with engine lubricant and cooling system full, 1,800 gal. of fuel, 48 cu. ft. of sand, no dynamic brakes, no steam generator, and no train heating water: weight would be approximately 343,000 lb., to which would be added up to 32,000 lb. of ballast, largely concrete, for a total weight of 375,000 lb.

"Train Master" with engine oil and cooling system full, 1,800 gal. of fuel, 48 cu. ft. of sand, 2,400 gal. of train heat water, dynamic brake, and a 4,500-lb.-per-hr. steam generator: weight in this case would be approximately 366,000 lb., to which up to 9,000 lb. of ballast



The Tri-Mount truck, named for the three-point support shown in the top view, features good riding qualities and accessibility for maintenance.

might be added to bring the total weight to 375,000 lb.

The total weight is not limited to 375,000 lb. but may be increased by additional ballast when extremely high starting tractive force is desired for special applications.

In operation, the six motors are first connected across the main generator terminals in two groups, with the three motors in each group in series and the two groups in parallel at full field strength. As locomotive speed increases, motor field strength is reduced by two steps of partial shunting. The next step is transition, or a change in motor connections across the main generator, to two in series, three groups in parallel at full field strength. With further speed increases, motor field strength is reduced in three successive steps of shunting. When locomotive speed is decreasing these events occur in the opposite sequence.

The field shunting connections are made through electro-magnetic contactors. The main motor connections across the generator are made by electropneumatic contactors which in turn are energized by a motor-operated cam-action multiple switch arranged to provide closed circuit transition with the required time delay and interlocking inherent in the design and relationship of the several cams. The signal for each of the shunting and transition events is an automatic function of locomotive speed, and is given by a control unit proved on previous F-M locomotives.

The system of excitation and automatic load control permits use of a selector through which excitation can be held to values appropriate for humping operations. This device provides a single manual step for obtaining the small amount of power required at low speeds when humping cars. The eight throttle steps divide the total humping power into the small increments needed to regulate train speed over the hump as the tractive force requirements change.

CONTINUOUS TRACTIVE FORCE RATINGS and Speeds for the Three Gear Ratios Available on the "Train Master"

Gear ratio	Maximum speed m.p.h.	Tractive force lb. at m.p.h. (continuous rating)
68:15	65	78,750 at 9.2
63:15	70	72,900 at 9.9
62:17	80	63,300 at 11.4

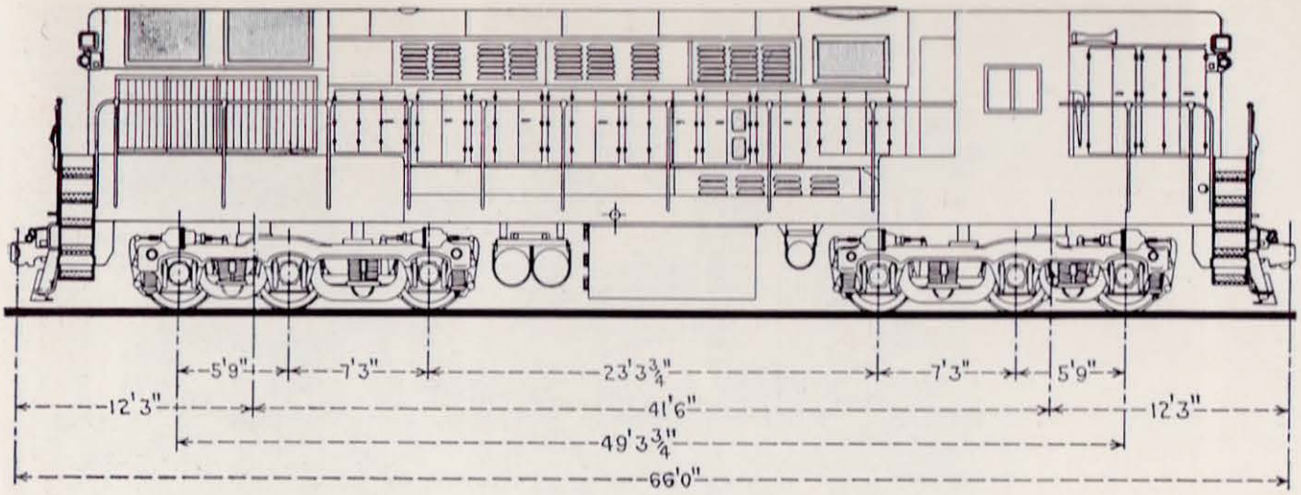
DYNAMIC BRAKE CURVE

Curve No.	Gear ratio	Max. dyn. brake, lb.
1	68:15	70,000
2	63:15	64,800
3	62:17	56,400

GENERAL DATA ON FAIRBANKS-MORSE 2,400-HP. "TRAIN MASTER"

Horsepower	2,400
Wheel arrangement	C-C
Wheel diameter, in.	42
Journal-bearing size, roller or plain, in.	6½ x 12
Starting tractive force at 30 per cent adhesion, lb.	112,500
Continuous tractive force at 10 m.p.h., lb.	72,900
Maximum speed with 63:15 gearing (optional gearing available), m.p.h.	70
Dynamic brake capacity at rail, hp.	3,000
Overall length, ft.	66
Overall height, ft.	15
Truck center distance, ft. - in.	41—6
Truck wheel base, ft.	13
Total wheel base, ft. - in.	49—3¾
Maximum weight on drivers, fully loaded, lb.	375,000
Average axle load at rail, lb.	62,500
Steam generator capacity, lb. per hr.	4,500
Fuel, gal.	1,800
Water, gal.	2,400
Sand, cu. ft.	48

Air from the main generator is vented directly outside by ducts. This method of disposing of warm main-generator air prevents the accumulation of excess heat within the engine compartment and provides 20-25-deg. cooler air to the traction-motor blowers than usually



Only 66 ft. long and 15 ft. high, the "Train Master" can be equipped with steam generator, dynamic braking and train control together with the full maximum capacity for operating supplies.

encountered when main generator air is discharged inside. Engine air is separately drawn directly from outside through six 20-in. by 20-in. by 4-in. impingement-type panel air filters having two density stages.

Electrohydraulic control of engine speed is used, the throttle having the conventional eight steps. Automatic control of the strength of a two-pole field in the main-generator exciter is used to regulate main-generator output for each throttle step. Throttle steps are trainlined electrically for multiple unit control.

The multiple-unit control arrangement includes electric trainlining of throttle, reverser, dynamic brake control, boiler blow-down control, alarm signals, wheel slip indications, full sanding control, and air compressor synchronizing. Conventional multiple-unit air trainlines are provided for 24-RL brake equipment. Duplex receptacles and trainline pipe connections are provided. The multiple control is flexible enough schematically and physically to facilitate multiple operation in existing motive-power pools.

Two auxiliary electrical systems are incorporated in the "Train Master." The first, a variable-voltage, variable-frequency three-phase a.c. system, consists of a separately excited alternator, powering ten Fairbanks-Morse axial-air-gap induction motors. Six are permanently connected, with each driving one of six traction-motor blowers. The other four drive the four engine cooling-system fans. These latter are connected through electromagnetic switches on thermostat signal.

The axial-air-gap induction motors were used because of their compactness and the low maintenance requirements generally characteristic of induction motors. Each traction-motor blower is located on the underframe deck and as directly above its corresponding traction motor as is physically possible, thus reducing to a minimum the duct work in the underframe structure. The three forward blowers are accessible through a removable section of the cab floor, the three rear blowers are accessible in the engine compartment. The radiator-fan motors are accessible in two ways: through the rear end door into the cooling-system compartment, and by removal of the protective grid on the outside.

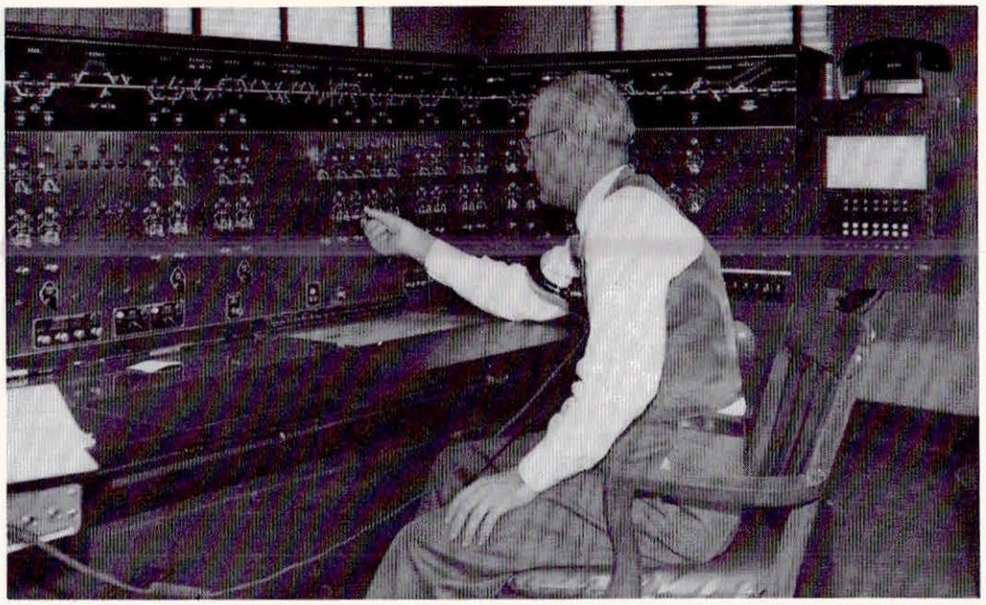
All control circuits, lighting circuits, power for steam-generator operation, separate excitation, fuel-pump motor, and engine starting circuit are supplied from a 25-kw., 75-volt d.c. generator in conjunction with a 32-cell lead-acid storage battery.

The 25-kw. auxiliary generator is mounted in a common frame with the main-generator exciter on the main-generator frame. The common armature shaft is belt driven from the main-generator shaft. Approximately 21 kw. capacity is available after excitation loads are satisfied. This assures ample reserve capacity for the normal control, lighting and battery-charging loads and for the many extra loads imposed by modern railroad operating needs such as cab signal and train speed-control systems and communication systems.

The dynamic brake equipment has been proportioned to utilize fully the capacity and characteristics of the traction motors, dissipating 3,000 hp. at the rail over the braking speed range. The traction motors are cooled at this rating by operating the engine, hence the traction-motor blowers, at a speed equivalent to sixth-notch throttle operation. Control of dynamic braking effort is through a selector handle on the master controller. The dynamic-brake grids and motor-driven cooling fan are housed as a subassembly in the engine hood compartment.

The Tri-Mount trucks used under the "Train Master" employ the same three-point loading principle used successfully on most high-speed electric locomotives. The center plate is mounted on the No. 1 transom, and two loading pads are mounted near the outer ends of the second transom. This arrangement spreads the load application along the entire length of the truck, steadies the frame and reduces the truck frame reaction to track irregularities. The truck also has an independent equalizer system to give the full advantage of the six-wheel truck's known ability to absorb high and low spots.

The center plate has been moved away from its customary position directly above the center motor, making it possible to eliminate the heavy bridge structure and to provide accessibility to the center traction motor. As a result, on this truck, all motors are equally accessible for inspection and servicing, and wheel and motor assemblies can be dropped without disconnecting the traction-motor blower ducts. The brake rigging is similarly easily maintained, being completely visible for inspection and having adequate clearance for changing shoes. Clasp brakes are used for high braking power with low shoe pressure. Traction motors, wheels, axle and gear assemblies and journal bearings, plain or roller, are interchangeable with comparable units on other Fairbanks-Morse locomotives.



The C.T.C. is controlled by a machine in the dispatcher's office at Manchester.

On the Atlantic Coast Line . . .

C.T.C. Adapted to Volume of Traffic—Present and Future

Costs reduced by planning signaling system to meet present traffic requirements, with provision for expansion as anticipated traffic increases occur

A special arrangement of centralized traffic control, designed to reduce installation costs in relation to present-day traffic, yet capable of being easily expanded to handle more trains, has been installed on 129 miles of single track on the Atlantic Coast Line between Fitzgerald, Ga., and Manchester.

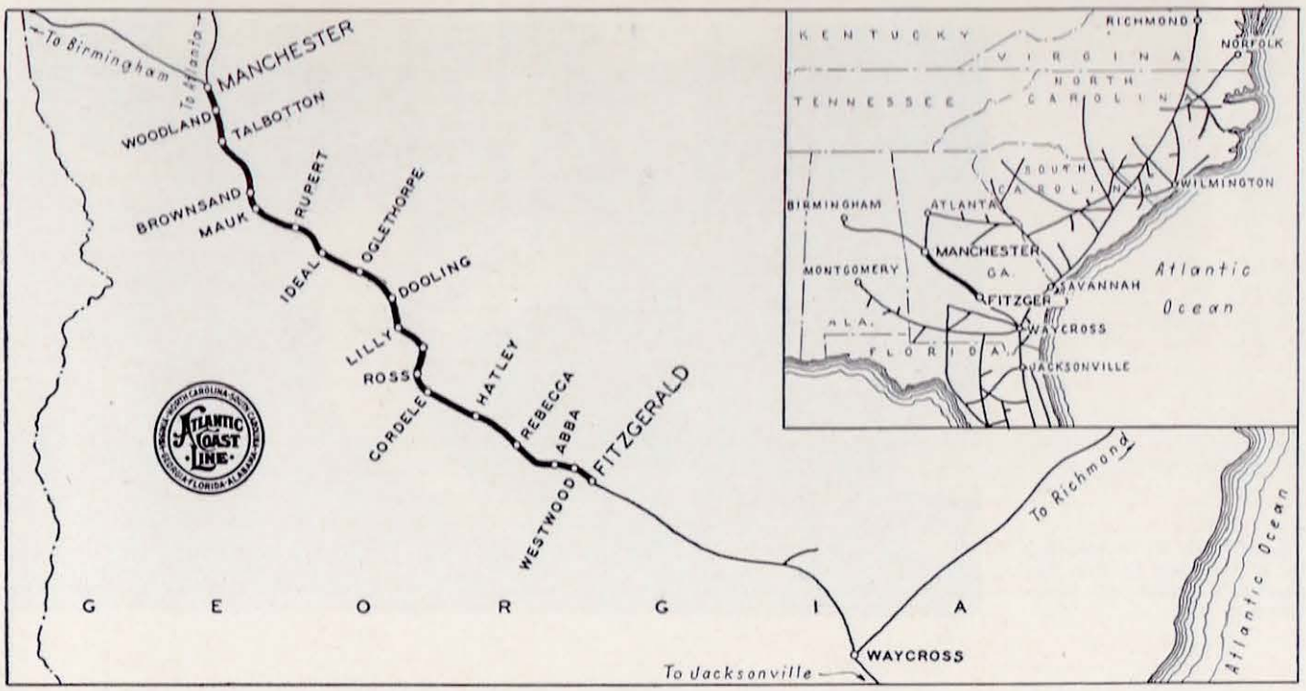
This segment is part of the former Atlanta, Birmingham & Coast, which was merged with the ACL in 1946, and is now operated as the Western division of the ACL. This division includes lines from Atlanta and Birmingham to Manchester, and then from Manchester to Waycross, Ga., where it connects with the ACL main line north to Richmond, Va., and south to Jacksonville and other points in Florida.

Traffic Has Increased

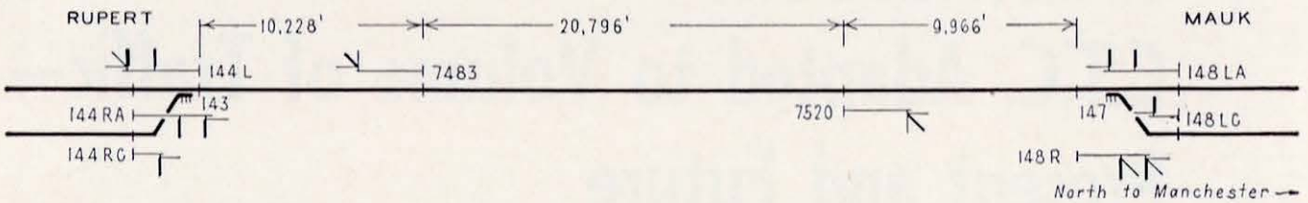
Since the AB&C was taken over by the ACL, the track has been rebuilt with 100-lb. rail, new ties and crushed stone ballast, and traffic has grown rapidly. Tonnage has increased more than 130 per cent, and while the ACL handles much longer trains over the improved property by use of multiple-unit diesels, the number of trains operated has increased approximately 50 per cent. Prospects for the Western division indicate a continuing growth, and as the ACL progresses its program of building up the importance of these properties, it is expected that traffic over the line will show an even greater increase. These facts necessitated an immediate start on a signaling system that would protect present operating requirements, but designed, however, for expansion commensurate with the future potentialities of the line.

The "Dixie Flyer," Chicago-Florida passenger train, has recently been rerouted over the Western division between Atlanta and Waycross via Manchester and Fitzgerald. The "Dixie Flagler," Chicago-Florida streamliner, also operates via that route, and a local passenger train is operated each way daily. Present scheduled freight traffic on the Waycross-Manchester section includes eight through trains daily, with extra trains operated as required. The total traffic ranges from 14 to 17 trains daily.

No signaling was in service previously on this segment, and with the increase in traffic that has come about since the ACL acquired the AB&C, some form of track-circuit-controlled signaling was needed as a means of expediting train movements and improving safety. Based on realization of the benefits of centralized traffic



The new C.T.C. territory extends from Fitzgerald to Manchester.



The track and signal arrangement between Rupert and Mauk is typical.

Signals for authorizing train movements are controlled by the dispatcher.

Power switch machines were installed at both ends of the pass tracks.

control in several previous installations on the ACL as well as on other roads, it was decided to install centralized traffic control, rather than conventional automatic block, on the Fitzgerald-Manchester segment, with provision for later insertion of intermediate block signals. Steps were taken to minimize the equipment required so that the cost and capacity of the project as a whole would be in proportion to the present traffic load and operating requirements, but still provide the basis for expansion of the system when the volume of traffic justifies.

The practicability of installing centralized traffic control rather than automatic block was enhanced by the fact that several of the old pass tracks (as they are called on the ACL) were removed, while at the same time others were lengthened. Therefore, the number of pass tracks to be equipped with power switches and signals, controlled by the dispatcher, was reduced from 26 to 14 on the entire 129 miles. Thus the reduction in number of pass tracks; adoption of "pass track to pass track" signaling; and use of coded track circuits were some of the factors that reduced costs.

Fewer Pass Tracks

Previously, the capacity of pass tracks ranged from 15 to 69 cars, and they were spaced from 1.6 to 8.2 miles apart. Improvements in track and the use of diesel locomotives permitted the operation of longer trains, thus requiring longer pass tracks. Experience indicated that centralized traffic control, with power switches and train operation by signal indication, would permit the use of fewer pass tracks. Therefore, when laying new rail and rebuilding the track, 13 pass tracks were extended, one new pass track was constructed, seven old ones were removed, and six were left in place for use only as spurs or house tracks. The locations and car capacities of the 14 pass tracks are shown in a table.

In the first 51 miles of the line north from Fitzgerald to Lilly, the curves are more numerous, ranging up to 5-degree maximum. North from Brownsand to Manchester, 29 miles, the railroad passes through hilly country with heavier curvature including four 5-degree curves and twelve 6-degree curves, five of the latter being within 3 miles of the east end of Manchester yard. The maximum permissible speed is 60 m.p.h. for passenger trains and 50 m.p.h. for freights.

As stated previously, traffic presently ranges from 14 to 17 trains daily. There are no scheduled meets in this territory at this time, and the normal spacing between following trains is an hour or more. It was decided that, under these circumstances, and until the anticipated increase in traffic occurs, signaling for "pass track to pass track" moves would be adequate, with no provision for a following train in such a "pass track to pass track" block, except between Talbotton and Manchester yard.

Pass Tracks	*Capacity*
Woodland	85 cars
Talbotton	125 cars
Brownsand	85 cars
Mauk	85 cars
Rupert	125 cars
Ideal	85 cars
Oglethorpe	105 cars
Dooling	85 cars
Lilly	125 cars
Ross	85 cars
Cordele	125 cars
Hatley	85 cars
Rebecca	125 cars
Abba	85 cars

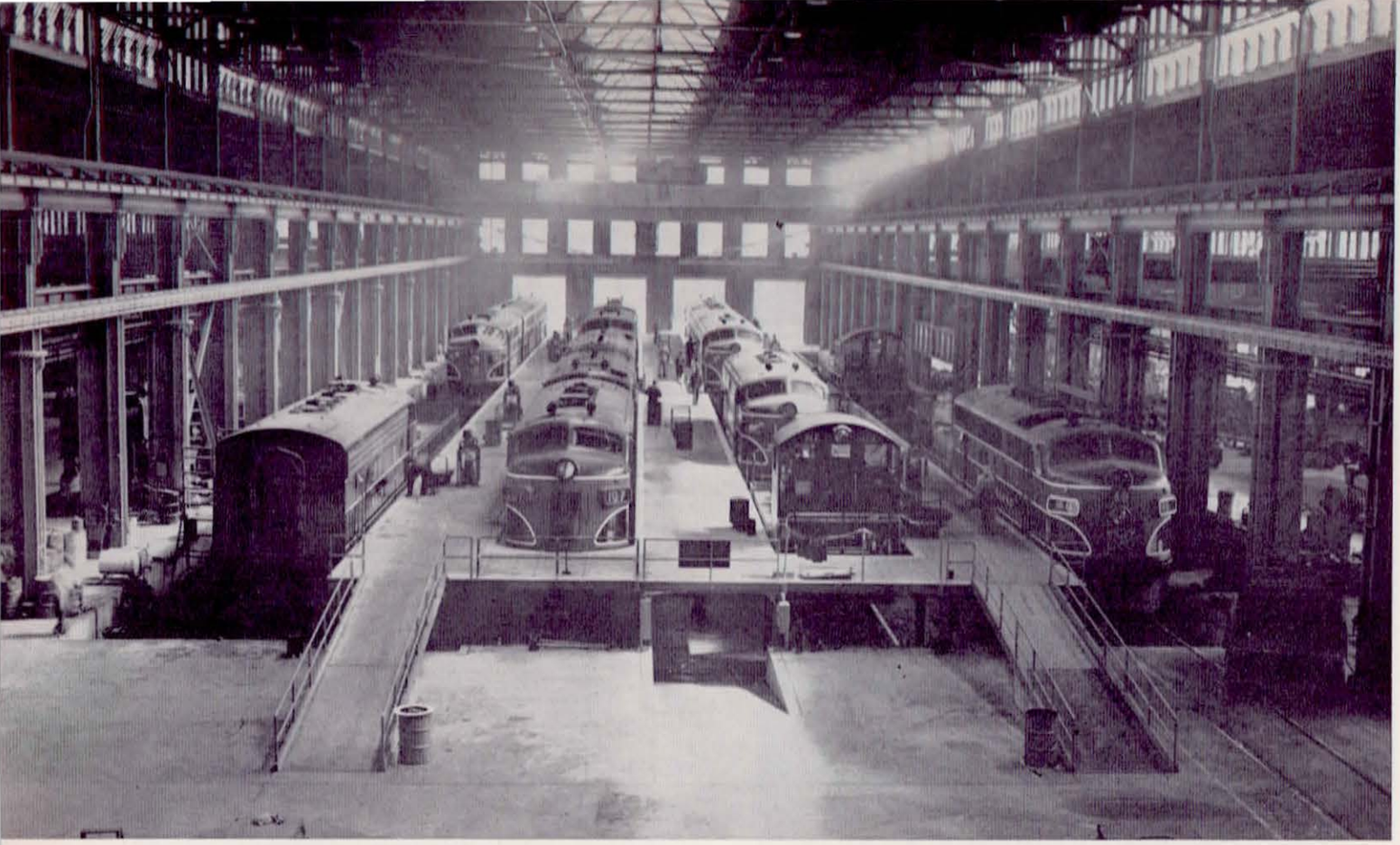
This type of installation uses two-position "red" or "green" signals for the leave-siding signals, such as 144RA and 144RC at Rupert, and 148LA and 148LC at Mauk (diagram). The "pass track to pass track" block eliminates intermediate automatic block signals, the only intermediates being signals such as 7483 and 7520, between Rupert and Mauk, which serve primarily as approach signals, 7520 being the approach signal for signal 148R.

As shown in the diagram, approach signal 7520 is about 2 miles (9,966 ft.) in approach to signal 148R at Mauk, and approach signal 7483 is about 2 miles (10,228 ft.) in approach to signal 144L at Rupert. One reason for placing these signals about 2 miles out is that the coded track circuits operate properly for lengths up to 2 miles, which is, of course, adequate for train stopping distance.

An interesting feature of this project is the use of normally de-energized, reversible coded track circuits to accomplish the local controls of signals in the "pass track to pass track" blocks, thereby obviating the installation of line wires for local controls in such blocks.

The control machine, in the office at Manchester, is the Union Style C, 10 ft. long, and is equipped with automatic train graph which registers 33 "OS" points. The electric switch machines at the ends of pass tracks are the Union M22B, dual-control, with low-voltage d.c. motors. On switches leading to other than controlled pass tracks, the old hand-throw stands were replaced by T-21 stands, which, in effect, are manually operated switch-and-lock mechanisms, including point-detectors. This stand also operates a pipe-connected derail at the clearance point on the turnout. The hand-throw lever, on this T-21 stand, is locked in the normal position by a SL25 type electric lock.

This centralized traffic control project was planned and constructed by ACL forces under the jurisdiction of J. S. Webb, chief engineer communication and signaling; the principal items of signaling equipment being furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company.



The Rock Island's new diesel maintenance facilities at Silvis in a 100-ft. bay afford generous room for four servicing tracks, three of which are stub ended while the fourth continues on into the heavy-repair section. A truck-release track, connected to three of the servicing tracks by a drop table, is in the adjoining bay at the right.

Diesels Take Over Another Steam Facility

The heavy-repair section of the diesel shop occupies the west end of the building. The electrical shop is in the two low bays at the left, while an engine-repair room is in an enclosed room built within the low bays at the right.

CRI&P secures a modern shop for the maintenance and repair of diesel road-freight power by converting a portion of its main locomotive shop at Silvis, Ill.

The transition from steam to diesel-electric power was a gradual process on the Chicago, Rock Island & Pacific, and, as the need for facilities required for the repair of steam power lessened, it was logical for the road to look for existing structures devoted to steam locomotives that could be converted to the care of its growing diesel fleet. Since the west end of the main locomotive shop building at Silvis, Ill., was suitable for this purpose the road in 1949 converted this portion of the building into a system shop for handling the heavy overhaul repair work on passenger and freight diesel units. Running maintenance and repairs of the road-freight diesel power were handled in a temporary structure built near the main shop building until this year, when half of the high erection bay at the east or other end of the main shop building was converted into a modern shop for handling this work. This move has brought about higher efficiency in caring for the diesel power as all repair facilities are now under one roof.

The easterly portion of the diesel shop at Silvis is intended primarily for the repair and running maintenance of road-freight units and yard switchers; while a new diesel shop is being built at Chicago for the running maintenance of passenger units.

Early Shop One of the Largest

The main shop building, 860 ft. long and 276 ft. wide, was built at Silvis in 1902, and in its early days was one of the largest structures of this type in the world. It is a brick structure supported on a structural-steel frame and has five longitudinal bays. The center bay is the highest, being 46 ft. 6 in. from the floor level to the lower chord of the trusses, and is approximately 100 ft. wide. It has two 150-ton overhead cranes which travel the full length of the building. The length and unobstructed width of this high bay, together with the presence of the overhead cranes, make this portion of the building very suitable for a diesel shop.

The facilities installed in 1949 at the west end of this building include three tracks entering from the west and extending at floor level about 160 ft. into the high bay, where diesel units are dismantled, overhauled and reassembled. In the two lower bays north of this area an enclosed engine-repair shop was constructed for the complete overhauling of diesel engines. A distinctive feature of this engine shop is that the air is pressurized for preventing any dust or dirt from entering the room through the doors. In the two lower bays lying south of the dismantling area of the high bay is a large wire-partitioned area for an electric shop where traction motors and generators are repaired. A lye cleaning vat is located west of and outside of the shop building proper.

To Service Road-Freight Units

Prior to undertaking the rearrangement of the easterly end of the locomotive erection shop an analysis had been made to determine the number of diesel units that would be maintained at this point. As a result of this study, about 450 ft. of the east end of the high erection bay was remodeled for the new power. The entire floor in this area was torn up, including the many old engine pits built herringbone fashion on each side of a center aisle. Piping for draining these pits was removed.

A depressed floor area, about 88 ft. wide by 330 ft. long, was constructed so as to leave a 30-ft. cross aisle at the east end, and four tracks, 22 ft. center to center, built with 132-lb. rail, were brought into the building from the east, supported at 4-ft. 6-in. centers on steel H-beam pedestals through the depressed area. The four tracks were provided with inspection pits, 4 ft. deep, throughout the depressed-floor area except for a 10-ft. cross aisle left at the west end. Working platforms, each 11 ft. wide and supported by a single line of columns along their longitudinal center, were constructed between the tracks at locomotive-floor level. These are built of Robertson metal Q-deck with concrete top hardened with Master Builders' Metalicron. The three northerly tracks are stub-ended but the fourth was extended so as to connect with the southerly of the three tracks laid from the west end of the building in the heavy-repair section, thereby providing one through track.

All levels are connected by means of ramps and by several access ladders. Carborundum chips were used for surfacing the concrete on ramps for their non-slip quality.

Drop Pit Installation Difficult

A Whiting 100-ton drop table and pit were built near the middle of the new layout to serve the three southerly tracks and a truck-release track laid in the adjoining bay at the south of the shop building. This installation posed a small problem because, since the inside width of the drop pit was 23 ft. 10 in. and the columns between the bays were spaced 22 ft. apart, it was clear that the drop pit could not connect both bays without removing at least one column. This was accomplished by establishing the center line of the drop pit on the same line as one column, then cutting about 15 ft. off the lower end of the column and supporting the remainder on plate girders fastened to the adjacent columns to provide about 10 ft. clearance above the floor. The old column foundation was then removed along with the other necessary excavation.

The installation of the drop pit itself gave some trouble because the water table of the underlying sandy

soil was about 6 ft. above the proposed bottom of the pit. The saturated sand sloughed down as fast as it was excavated, requiring the use of cofferdams. A steel sheet piling cofferdam was driven at the north end of the proposed pit around an area approximately one-third of the total 33-ft. inside pit length. However, in spite of the use of two large pumps, the water seeped through and made pit excavation impracticable. A well-point system, capable of pumping 40,000 gal. per hour, was then used, with a 6-in. header. It proved satisfactory in dewatering the area. Concrete was then poured. At night the pumps were stopped and the water allowed to inundate the concrete to help in its curing. This drop pit was designed as a rigid frame to effect economy in its construction.

After the concrete floor and walls in the northerly portion of the pit had hardened sufficiently, the well points and sheet piling were withdrawn. The entire operation was then repeated in two successive stages until the pit was completed.

Inside Servicing Facilities

Lubricating oil drains are provided at 40-ft. intervals on both sides of each servicing track and pipes are provided to carry this oil to a sump pit. An automatic pump, actuated by a float switch, picks up the dirty oil from the sump and pumps it about 1,300 ft. to an outside oil reclamation plant. Fresh oil is provided in the shop by several meter stations located on the two outer working platforms, where 50-ft. hoses make it accessible to all diesel units that may be in the shop.

Compressed air and raw and treated water are available both above and below the working platforms through outlets conveniently located along the lengths of the two outer platforms. Electrical outlets, with hangers for extension cords, are provided on the rail pedestals at suitable intervals along each servicing track and on the top sides of the working platforms.

Small Rooms Also Converted

A small two-room concrete-block building was constructed within the main shop building in the bay north of the maintenance shop. It was equipped as a filter-cleaning and a small-parts-reconditioning room. An area in the low bay adjacent to and south of the maintenance shop has been equipped as a wheel shop, while, in the extreme southeast corner of the building, a wash and locker facility was constructed for the convenience of road engine crews.

The lower 18 ft. of the east wall was altered to provide openings 14 ft. wide and 16 ft. 6 in. high for the four new service tracks, and Mahon power-operated rolling steel doors were installed. Also, an 8-in. concrete approach slab was constructed outside immediately adjacent to the building entrance.

No extensive changes were made in the building's heating and ventilating systems. The structure is heated by hot air driven through ducts under the floor to risers throughout the shop. Air is drawn through steam coils by large fans in each of the four corners of the shop. Ventilation is handled by a movable sash in the lower glass-block window panels and in the side panels of the clerestory.

The lighting was considerably improved. The old overhead 1,000-watt lamps placed above the crane runways were replaced by 400-watt mercury-vapor lights spaced at 22-ft. centers. Also, banks of fluorescent lights were installed under the working platforms. The lighting circuits are separate from power circuits used for operating motors and by welders, to avoid light flickering and dimming.

Outside Servicing Facilities

At Silvis the first servicing facility encountered by an incoming diesel locomotive is a sanding station, which provides sand for locomotives on any of three tracks. Dry sand is shipped to this plant and raised to a sand-storage tank by a one-ton lift drum. From the storage tank the sand flows by gravity to a 10-ton lift drum from which it is carried by air pressure to eight small servicing tanks, 2 ft. in diameter by 4 ft. high. From these tanks the sand flows through servicing spouts directly to locomotives. The main storage tank was made by the railroad from a steel tank car, remodeled to remove the dome. This tank stands on end with its bottom elevated about 12 ft. above the ground.

The next servicing facility is a concrete platform, 154 ft. long by 64 ft. wide, from which fuel and both boiler and radiator water are furnished to units standing on any one of three tracks. Fuel is shipped to Silvis in tank cars and is presently stored in two 20,000-gal. steel storage tanks. A 160,000-gal. storage tank for fuel is now under construction. The oil is filtered before it is stored and also before it is pumped to the six platform servicing cranes. Printing-type meters are installed on each of the cranes. For fire-protection purposes, another pipe line carrying raw water was laid to several hydrants strategically located near the platform, and portable C-O-Two fire extinguishers were furnished as well.

The motors, pumps, filters and a water-treating plant are in a nearby concrete-block service building. This building also houses an engine-supply room and a locker and wash room.

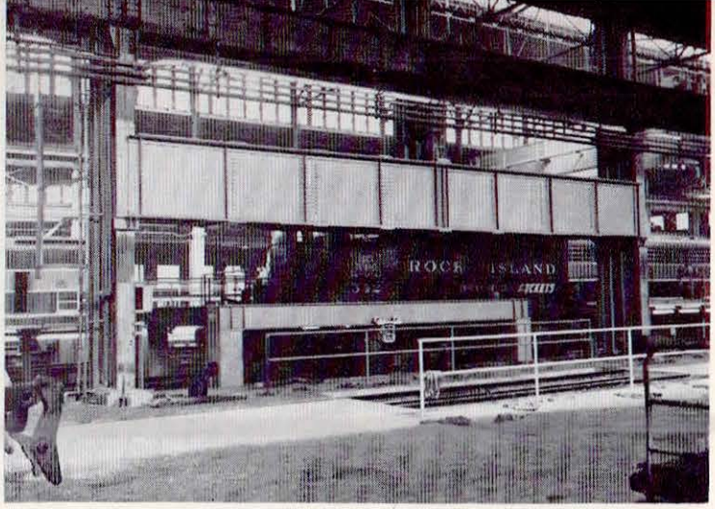
The next servicing facility is a locomotive washing platform, 42 ft. wide by 160 ft. long, serving two tracks. Steam heating coils have been embedded in the concrete slab for keeping the surface free of ice. Only half of the platform width, which serves the incoming engine track, is equipped with the cleaning equipment, the other half (on the outgoing engine track) being for emergency use. The cleaning equipment includes a truck-solvent spray, a body-solution spray, a set of scrubbing brushes, a set of rinsing brushes, a body-rinse spray, and a truck-rinse spray. A pressure of about 35 psi. is used for the solutions, 60 psi, for the body rinse and 175 psi. for the truck rinse. A control house was constructed for housing the turbine-type pumps and vats for the solvent and solution, as well as the centrifugal pumps for the water rinses.

All of the servicing platforms are effectively illuminated.

Shop Services 50 Units Daily

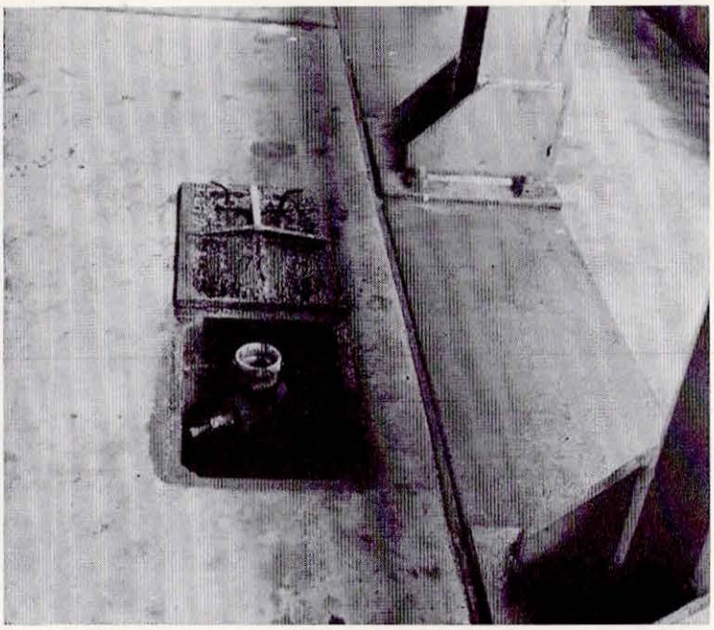
Every road-freight diesel coming into Silvis goes through the servicing facilities and into the maintenance shop, unless it is due for heavy overhaul, in which case it goes to the heavy-repair section of the shop. On an average, the maintenance shop services 50 units daily and is responsible for the care of a total of 100 road-freight units. Switchers are serviced in the yard but are brought into the maintenance shop for the monthly progressive maintenance or for general overhaul.

The new shop and its servicing facilities were constructed under the general supervision of W. B. Throckmorton, chief engineer.

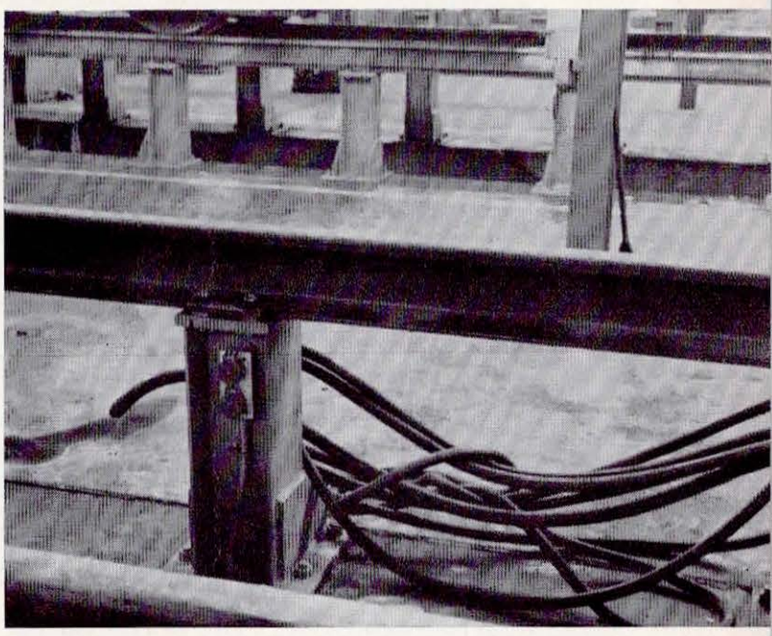


Because the drop table was too wide to extend between the building columns to an adjacent bay, it was necessary to cut off the lower part of one column and support the upper portion on this plate girder fixed to adjacent columns.

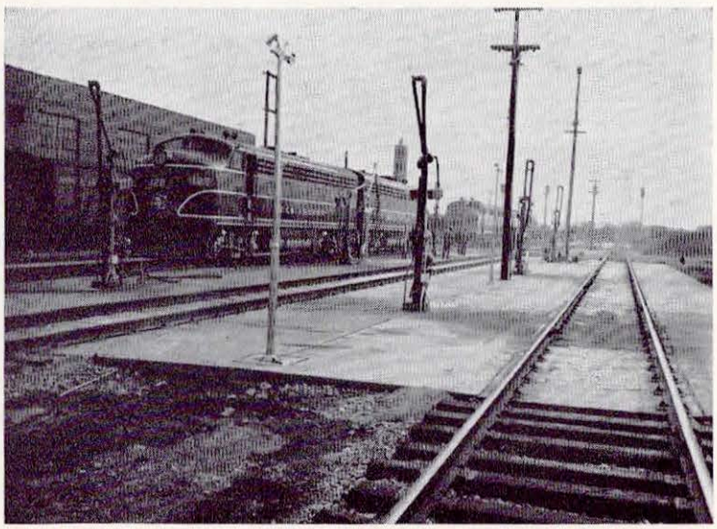
Fresh lubricant is available at several points on the working platforms. All oil is metered at these stations as it is delivered through service hoses, 50 ft. long, and stored on reels underneath the platform.



Dirty oil is removed from the engines of incoming locomotives by a hose connected to drain like this. From the drain it flows by gravity into a sump, where a pump forces it to an outside oil-reclamation plant.

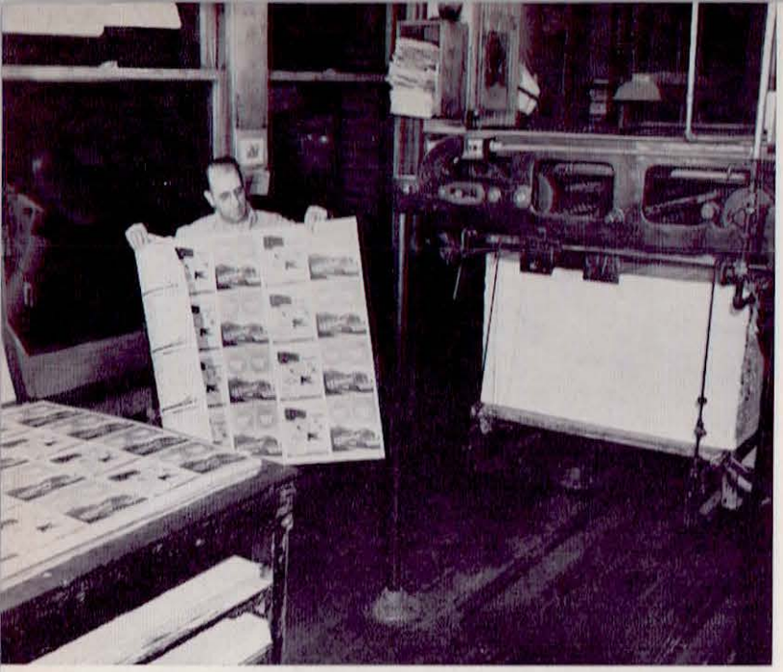


Several electrical power outlets are available on the pedestals which support the servicing rails above the depressed floor and the pits. Hangers are provided for the extension cords.



At this platform, diesel units are supplied with fuel oil and water for boilers and radiators. In the background is shown a road-freight diesel at the sanding station awaiting servicing.

Although the locomotive washing platform serves two tracks, one (outbound) is used for emergency washing and is not equipped with brushes and sprays. Steam coils are embedded in the concrete platform to prevent freezing.



1 The timetable covers are printed several weeks before the scheduled material on the inside pages.

2 The large sheets containing eight covers are first folded on this automatic folding machine . . .

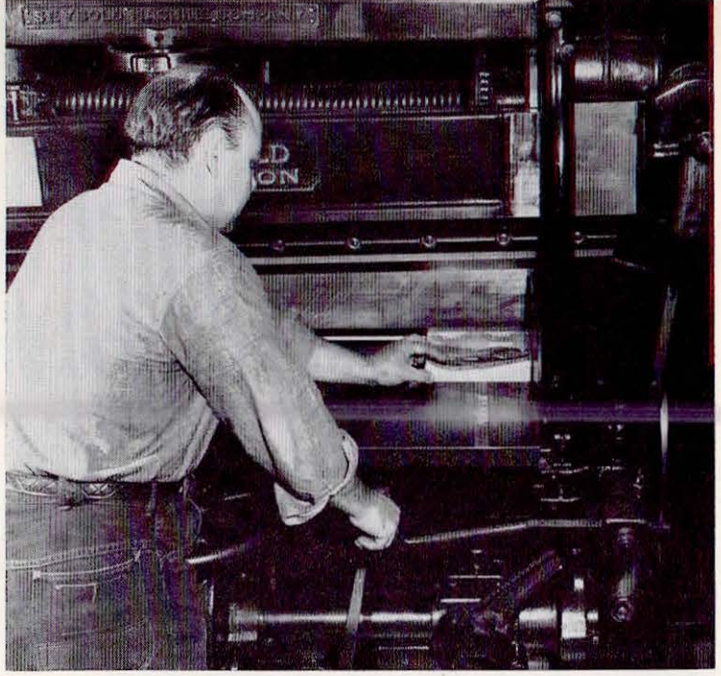
5 At the Commercial Letter Company plant this special press prints one cover from each slug of type.

6 The envelopes used for mailing "personalized" folders are addressed by machine.

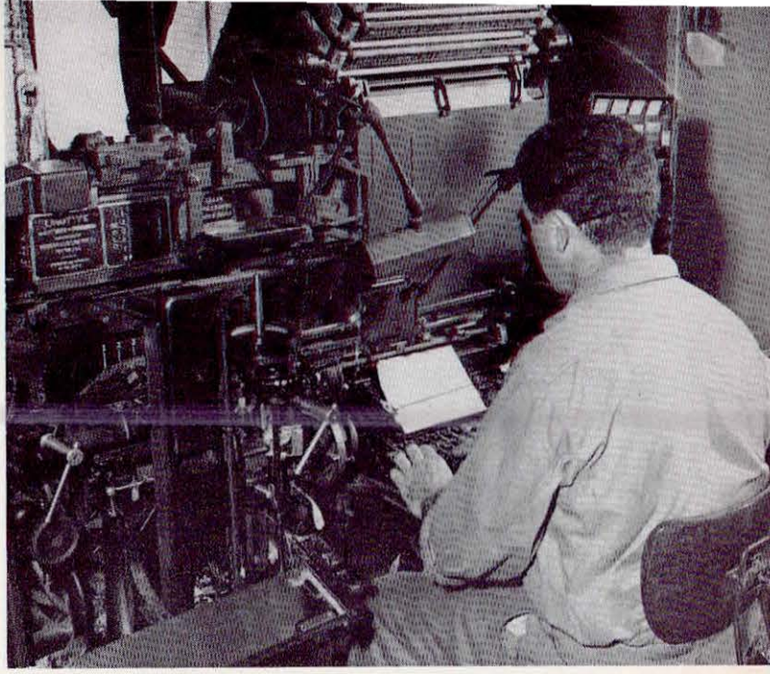
Personalized Timetables Build Sales

As a bridge line extending from St. Louis west to the Rockies and south to the Mexican border, the Missouri Pacific is unusually dependent upon the sales efforts of off-line ticket agents and passenger sales representatives to build passenger volume on its fleet of "Eagle" trains. For the sole purpose of encouraging these transportation specialists—mostly employees of other railroads far removed from the Missouri Pacific — to route as many of their customers as possible via its lines, the Missouri Pacific has been actively cultivating their support by means of direct mail advertising. Undoubtedly the most effective direct mail piece yet employed in this campaign is its full-color "personalized" passenger timetable folder, with the recipient's name prominently printed on the front cover.

This full-color timetable folder had its inception with Paul J. Neff, chief executive officer, who observed that his company was losing a valuable advertising opportunity in simply distributing a million matter-of-fact schedule folders annually. Accordingly in 1946 the entire



3 . . . then trimmed in this cutting machine to make individual covers.



4 Linotype "slugs" are made for each person who is to receive a "personalized" folder.

7 These bindery workers combine the "personalized" covers with the completed inside folder.

8 The completed "personalized" folders are matched with the ready-addressed envelopes.

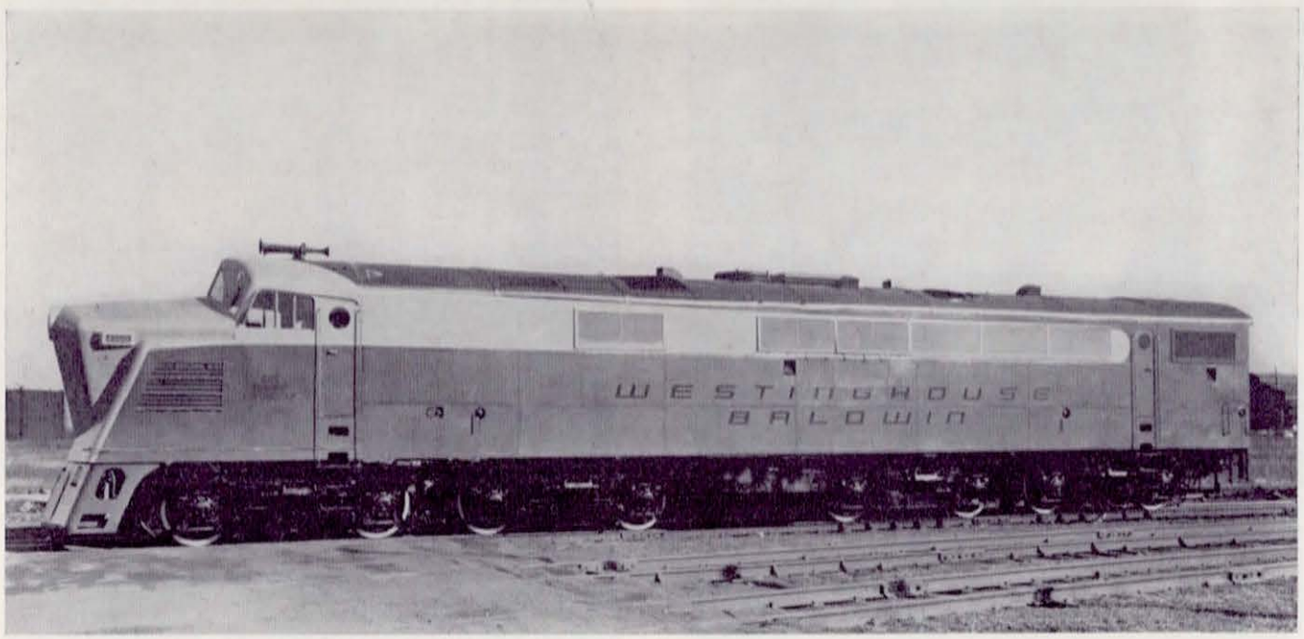
folder was redesigned to function as a sales piece. Schedules were redesigned and simplified; liberal amounts of color were introduced; advertising and sales messages were strategically placed throughout.

Shortly after the new "sales-minded" timetable—printed by offset in four colors—was introduced, Mr. Neff further suggested "personalizing" a copy of the new folder for every passenger service salesman who was in a position to influence the routing of passengers through the road's territory. It was his thought—since proved by experience—that a personalized folder would be kept in a convenient spot (and not be given away), where the salesman would reach for it instead of the folder of a competing line.

Although no railroad had ever done anything quite like it before, a production plan was worked out in cooperation with the Con P. Curran Printing Company, which prints the timetables, and the Commercial Letter Company of St. Louis, an organization experienced in the handling of personalized sales pieces. The process now used is illustrated on these pages.

By careful planning and control of the printing process, and by restricting the number of schedule changes made in a year, the Missouri Pacific has been able to keep the cost of its four-color timetables within reasonable limits, although four-color offset printing is basically more expensive than the conventional one-color printing processes most often used.

The Missouri Pacific management firmly believes—on the basis of almost six years of hard experience—its "sales-minded" timetable folders, coupled with its "personalized" folder direct-mail campaign, have brought more than enough extra passengers to its long-haul trains to justify the added expense.



The 4,000-hp. gas turbine locomotive.

The Gas Turbine as Railroad Motive Power

Although the Westinghouse locomotive was intended only to be an experimental unit, test and service runs totaling 50,000 miles involved no train detentions attributable to power plant

The gas turbine is a suitable prime mover for locomotive service, and the builders feel justified in having spent some two million dollars for its development, according to a talk made in Chicago on November 12 by J. K. Hodnette, vice-president of the Westinghouse Electric Corporation. The talk, which was made at a luncheon following an inspection of the locomotive by railroad men, included a summary of the present status of the Westinghouse gas turbine-electric locomotive. Mr. Hodnette said in part:

The locomotive first left its cradle on May 3, 1950. On that day it moved from the shops at East Pittsburgh to the Union Railroad.

Intended as Experimental Unit

It was intended to be an experimental unit. In part, of course, it was to be the means of finding out how well the gas turbine behaves when entrusted with the important job of hauling trains. But more than that. It was also to be the means of gathering information on dozens of engineering details necessary to make a good idea workable: matters about compressors, combustors, air intake and exhaust, engine controls, fuels, lubrication, etc. The design was planned to produce the greatest amount of gas turbine locomotive know-how in the shortest time. None of our people had in mind that this first unit was to be a model for sale, or even that it would be the best possible arrangement for regular railroad service. It was decided to equip this locomotive with two 2,000-hp. power plants instead of one larger one. At the time it was easier and more expedient for our engineering and shop to do it this way.

Performance

This gas turbine locomotive has hauled trains on six railroads. The first three provided relatively short periods of service during 1950 and 1951 on the Union, the Bessemer & Lake Erie, and the Pittsburgh & Lake Erie. These gave us experience close to home base, so we could watch this neophyte machine closely, and would have the best opportunity to observe and correct any troubles that would develop. We expected difficulties. In fact anytime I find our engineers and craftsmen turning out the first of an entirely new design without encountering trouble I'll know the product has been over-designed. Also, I'll know the engineering millenium has come. Anyway, we did gain invaluable experience and had an opportunity to find the weaknesses in the design. Frankly, we didn't find anything too serious.

It has been during this year that the locomotive has accumulated its real mileage experience. Operation started in February on the Pennsylvania between Harrisburg and Altoona, handling heavy mail and express trains. This was followed by service on the Missouri-

Kansas-Texas hauling revenue passenger trains between Denison, Tex., and Parsons, Kan. Finally we have the present operation on the Chicago & North Western.

In the first nine months of service this year, the locomotive made 227 trips for a total of 50,000 miles. It met 92 per cent of its assigned runs and experienced only three train detentions en route. The gas turbine power plants were responsible for none of these. They came from such things as leaks in oil lines and in the air-brake piping—things that could happen to any locomotive.

The locomotive experienced no difficulty maintaining schedules on the runs to which it has been assigned. All in all, the performance this year has been most gratifying.

What We Have Learned

It was on November 12, 1947, that our management authorized construction of this locomotive. It is now exactly five years and a couple of million dollars later. With this time and money we have accumulated a mass of gas turbine and locomotive know how. We feel that the results have justified the venture.

The following are the more important of our conclusions.

1. We are, first of all, convinced that the gas turbine is a suitable prime mover for locomotive service.

2. The locomotive has amply demonstrated that it can burn commercially available grades of residual fuels that are low in ash, without damage to the apparatus. The gas turbine has a bigger fuel appetite than the diesel. But it thrives on cheaper fuel.

Fuel Consumption and Costs

Fuel consumption, in gallons, has been approximately twice that of diesel locomotives in the same service. But the price paid for residual fuel has been, on the average, a little less than half as much per gallon.

Likewise we have learned how to solve the other problems associated with use of residual fuels, such as filtering, handling, and control of burning. The mixing of types of fuels has presented no difficulties.

3. The consumption of lubricating oil is essentially nil (on a diesel this is 5 to 7 per cent of the fuel oil cost).

4. In this locomotive the air is drawn in through the roof, where air is cleanest. No air filters were provided and none has been needed. This obviously eliminates filter maintenance. There have been no compressor problems resulting from dirty air.

5. The life of the combustors—where the fuel is burned—has been increased five times over that of the original combustors.

6. This locomotive employs a novel type of running gear. It consists of four two-axle trucks under a single cab with all axles motorized. This has been eminently satisfactory. Tracking characteristics have been excellent; flange wear low.

7. The experience fully demonstrates that a waste-heat boiler is a practical means for saving fuel in producing steam for train heating.

8. The electric-drive system has proved itself to be a satisfactory partner for a gas turbine.

9. The locomotive has been quite acceptable from a noise standpoint. Virtually the only noise comes from the whoosh of air through the compressors and turbines. This is not objectionable.

10. We have learned where auxiliary apparatus and control can be simplified. As this apparatus is the greatest source of road delays, we realize the importance to the railroads of simplification.

11. The experience has taught us how to handle a gas turbine locomotive in tunnels, terminals, yards, shops, and under different weather conditions.

Additional Experience Gained

In parallel with this experience gained with the gas turbine on a locomotive we have been accumulating much pertinent experience with gas turbines of other sizes and types and for other purposes. This includes both this same simple, open-cycle type and the more efficient closed-cycle varieties. It includes turbines used for gas-line pumping, for electric power generation, for mobile use by the Armed Forces, and, of course, many thousands for jet-propelled planes.

We are making designs of improved locomotives to incorporate the many things that we have learned with this experimental locomotive and from gas turbines generally. We are confident that we can build a better locomotive, a greatly simplified locomotive, and a more efficient locomotive. We also have the problem of evaluating both the operating and first cost of this type of locomotive in comparison with other types.

In evaluating the gas turbine, it would be folly to predict its future wholly upon accomplishments made to date. The modern diesel locomotive would not be a reality except for the impetus given the reciprocating engine by the automotive industry.

If the gas turbine should become a popular power plant for locomotive service, you should have no fears. Locomotives so powered will resemble diesel locomotives more than they will differ therefrom. Consequently, most of the facilities you have installed to service and maintain the diesel can be used effectively with the gas turbine.

In addition to the gas turbine locomotive, Westinghouse is participating in two other locomotive developments. Babcock & Wilcox, Baldwin-Lima-Hamilton, and Westinghouse are cooperating in construction of a high-pressure steam turbine-electric for the Norfolk & Western. This locomotive, soon to be operating, is a project to burn coal efficiently for one of our major coal-hauling roads.

Some major railroads have electric operation. Electrification is still a very fine way to run a railroad, but the large first cost has restricted its use. Last year, two 6,000-hp. ignitron rectifier locomotives were placed in service on the Pennsylvania, where they are making enviable records in heavy freight service. This type of locomotive can permit electrifications to be installed that use standard 60-cycle power on the trolley, thus introducing the possibility of electrifications based on commercial power without installation of expensive conversion apparatus.

All of these locomotives, the gas turbine, the steam turbine, and the ignitron rectifier, use the same traction motor that is used on diesel-electric locomotives. All might be considered electric locomotives, differing principally in the manner by which electric power is furnished to the driving motors.

On this basis, the main point to decide is the best and least expensive way to produce power for the driving motors, by a diesel, by a turbine, or from a central power station.

These developments in the locomotive art will surely prove to be most interesting. As we of Westinghouse look upon them, better locomotives will result. This, after all, is what both the railroads and the manufacturers wish to accomplish.

Waybill Studies

Additional waybill studies issued recently by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, include the following:

Statement No. 5240, Quarterly Comparisons, Traffic and Revenue by Commodity Classes—Terminations in First Quarter 1952 and 1951.

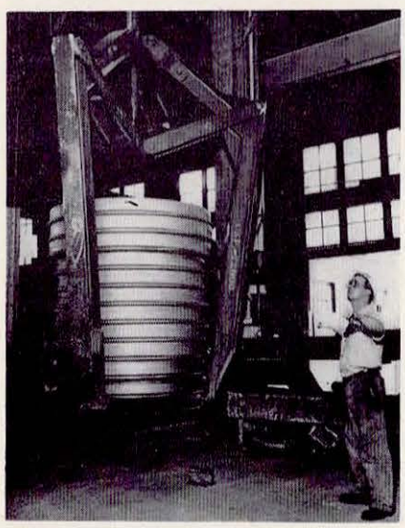
Statement No. 5242, State to State Distribution of Carload Tonnage by Major Commodity Groups, 1950—New England States.

The bureau has issued a "corrected copy" of its Statement No. 5235, Traffic and Revenue Progressions by Specified Mileage Blocks for Commodity Groups and Classes—Terminations in 1951. (*Railway Age*, October 13, page 14).

Hollar Will Supervise A.A.R.'s P.&S. Activities

When he becomes vice-president — assistant to president of the Association of American Railroads on December 1, Philip A. Hollar will have the association's Purchases and Stores Division under his supervision. The acting director of competitive transportation research will also report to Mr. Hollar.

The P. & S. Division has been in the association's Operations and Maintenance Department. Mr. Hollar's election to the A.A.R. vice-presidency occurred at the October 31 meeting of the association's board of directors. (*Railway Age*, November 10, page 73.)



SPECIALLY DESIGNED automatic tongs, made by the Heppenstall Company, of Pittsburgh, are used by the Edgewater Steel Company, Oakmont, Pa., to handle locomotive tires of varying sizes in loads of up to 11 tons. The entire operation is controlled by a craneman from a cab above the tongs; no ground crew, except a signalman, is needed.

I.C.C. AGREES TO REVIEW MP REORGANIZATION PLAN

The Interstate Commerce Commission has agreed to re-examine and reconsider its plan of reorganization for the Missouri Pacific and its subsidiaries.

Several reasons were cited by the commission: Increased earning power of the MP and the International-Great Northern; increased value of investments; the Korean war and the long-range defense program, and government efforts to stabilize the nation's economy at its present high level.

We find these things "constitute developments which have occurred since approval of the plan of reorganization, which were not provided for in such plan, and which make it necessary for us to re-examine and reconsider . . .," the commission said.

A certification to this effect will go to the U. S. District Court at St. Louis, Mo., where the reorganization case is pending. The court can then return the plan to the I.C.C. for hearings on how it should be changed.

The present MP reorganization was approved by the I.C.C. in 1949. (*Railway Age*, August 20, 1949, page 67). Among other things, it provided for capitalization of the reorganized road at $612,000,000, but provided for no participation by holders of the "old company" common stock, such holdings having been found "without value."

OVERSEAS

India.—An agreement between this country's government and three Swiss firms for construction of a passenger coach factory at Perambur in the state of Madras has been announced in India, according to Foreign Commerce Weekly. The Swiss firms are Industrie-Gesellschaft Neuhausen, A. G.; Schindler-Waggon, A. G.; and Wagons und Aufzuegefabrik Schlieren, A. G. The new arrangement supersedes a previous agreement with the Schlieren firm which provided only for technical assistance. Hope was expressed by an Indian railway officer that within five to seven years all India's passenger-coach requirements could be built entirely with Indian materials and technical skills to be acquired under the new agreement.

It was estimated the Perambur factory will cost $10,500,000, of which the Swiss firms will advance the equivalent of $2,400,000 to be used largely in financing foreign exchange requirements of the project. The projected factory will have an annual capacity of 350 cars and is to manufacture an all-welded steel coach modeled after those used in Switzerland. It will be eight tons lighter than the type now used on Indian railways, with a life expectancy of about 30 years.

ORGANIZATIONS

The **Traffic Club of New York** will hold its business meeting and annual members' dinner on November 25 in the Commodore Hotel.

The **National Association of Railroad and Utilities Commissioners** elected the following officers at its recent annual meeting, held at Little Rock, Ark.: President, E. S. Loughlin, chairman of Connecticut's Public Utilities Commission; first vice-president, C. L. Doherty, chairman of the South Dakota Public Utilities Commission; and second vice-president, W. F. Whitney, of the Public Service Commission of Wisconsin. J. P. Randolph was reelected general solicitor, and Austin L. Roberts, Jr., was reelected secretary-treasurer. Mr. Roberts also is assistant general solicitor.

Railroad Enthusiasts, Inc., New York division, will hold its next meeting on November 26, at 8 p.m., in Room 5928, Grand Central Terminal. Stanley W. Bradley, attorney for the Erie, will act as narrator for Kodachrome pictures on the Colorado "Narrow Gage Country." A new movie, produced by the A.A.R. Safety Section, entitled "Voice of the Book," will be shown, by courtesy of the New York Central.

SUPPLY TRADE

John S. Speer, II, has been appointed sales manager of the Speer resistor and Jeffers electronics divisions of the **Speer Carbon Company,** St. Marys, Pa.

George R. McMullen, formerly manager of automotive sales and manager of the transportation division of the Owens-Corning Corporation, has joined the sales department of the **Gustin-Bacon Manufacturing Company.**

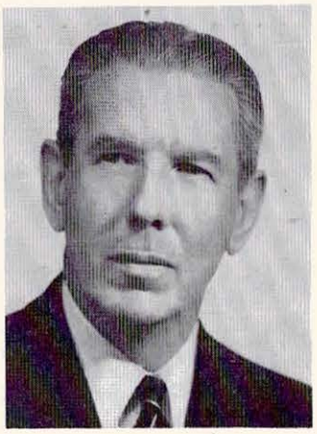
Jackson Kemper, who has been appointed general manager of the Watson-Stillman fittings division of the H. K. Porter Company, Roselle, N. J. Mr. Kemper will be responsible for all operating and sales activities of the division, formerly known as the Watson-Stillman distributor products division, of which he was sales head.

Lewis-Shepard Products, Inc., has appointed **Mussens Canada Limited,** 65 Colborne Street, Montreal, to represent its Master Line of materials-handling power trucks.

Kendall B. Rowell, formerly executive engineer of the **American Locomotive Company,** has been appointed chief engineer. He will be responsible for product development and engineering in the locomotive division, with headquarters at Schenectady, N.Y. Mr. Rowell joined the engineering department at New York in October 1940, and in 1945 he was transferred to Schenectady as liaison engineer between the sales and engineering departments. He was appointed commercial engineer in July 1950 and executive engineer in March of this year. Before joining Alco, Mr. Rowell worked as draftsman, inspector and engineer in the equipment engineering department of the New York Central.

Kendall B. Rowell

E. Woodward Allen has been elected vice-president of **Thomas A. Edison, Inc.** In his new capacity, he will work as assistant to **George E. Stringfellow,** vice-president and manager of the storage battery division, which Mr. Allen joined in 1923. He was appointed sales engineer the following year and manager of engineering in 1939. In addition to his engineering duties, he assumed those of director of market research early this year.



E. Woodward Allen

The **Clark Equipment Company** has appointed the **Towne Industrial Equipment Company,** of Dallas, Tex., as its dealer in 129 Texas counties.

The **Kershaw Manufacturing Company,** Montgomery, Ala., has appointed **Eugene F. Turner** as direct sales-service representative for the mid-central United States, with headquarters at Chicago. Mr. Turner has been associated with several railroads in the maintenance of way field since 1927.

John Miles Russell, who has joined the General Railway Signal Company as sales engineer, with headquarters at St. Louis. Mr. Russell was formerly office engineer with the Missouri Pacific Lines (Texas and Louisiana). He joined the road in 1928 and worked successively as assistant signalman, signalman, signal draftsman, signal foreman, and office engineer.

Paul J. Isvolt has been appointed district sales manager of the **Acme Steel Company,** at Cincinnati. He succeeds **Neil L. Anderson,** who recently was named manager of the Steelstrap department at Chicago. Mr. Isvolt, who holds a B.Sc. degree from the University of Notre Dame, joined Acme in 1929. After working in the cost and stockledger departments he transferred to sales as a correspondent. He was promoted to a salesman in 1937, first working in the company's Chicago sales district and later in the Michigan sales district.

Paul J. Isvolt

The **Baker-Raulang Company** has appointed **Industry Services, Inc.,** 332 South Diamond street, New Orleans, as distributor for the complete line of Baker industrial trucks and

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Robert S. Sweeney, who has been named vice-president and general manager of the Watson-Stillman Company, the hydraulic press division of the H. K. Porter Company, in charge of all manufacturing and sales activities of the division. Mr. Sweeney joined Watson-Stillman in 1944 as controller, and at the time of his recent promotion was vice-president and treasurer.

cranes in Louisiana and southern Mississippi. Complete sales engineering and service facilities will be maintained by Industry Services.

A. V. Higgins has been appointed manager of the western transportation zone of the **Sherwin-Williams Company.** Mr. Higgins, who formerly headed national account sales in the western region, will continue to maintain headquarters in Chicago.

Daniel B. Mugan, field engineer specializing in railroad service applications for the Edison Storage Battery division of **Thomas A. Edison, Inc.,** has retired after more than 36 years of continuous service with the division. **John McDonnell,** field engineer for the division since 1937, has been appointed to succeed Mr. Mugan.

OBITUARY

Leopold E. Block, one of the founders of the Inland Steel Company, died November 11 in Chicago. Mr. Block was vice-president of the company from 1897 until 1919, and chairman of the board of directors from 1919 until 1940, when he became chairman of the finance committee. He held that position until last January, when he was named honorary chairman of the board.

EQUIPMENT AND SUPPLIES

LOCOMOTIVES

The **Bessemer & Lake Erie** has ordered 13 1,500-hp. diesel units from the Electro-Motive Division of General Motors Corporation for delivery next spring. Included are four "A" and four "B" road units and five six-motor road-switching units.

The **Chesapeake & Ohio** has ordered 16 1,500-hp. general purpose diesel units from the Electro-Motive Division of General Motors Corporation. Delivery of the units, which will cost an estimated $2,661,920, is scheduled for next January and February.

The **Clinchfield** has ordered 14 1,500-hp. diesel units from the Electro-Motive Division of General Motors Corporation at an estimated cost of $2,310,331. Deliveries are scheduled for December. Included are five general purpose and nine freight units.

The **Delaware, Lackawanna & Western** has ordered ten 2,400-hp. "Train Master" diesel units from Fairbanks, Morse & Co.

The **Monongahela** has ordered seven 1,200-hp. diesel switching units, equipped for multiple-unit operation, from the Baldwin-Lima-Hamilton Corporation, at an estimated cost of $725,500. Delivery is scheduled for this month.

The **Spokane, Portland & Seattle** has ordered four 1,600-hp. road-switching diesel units from the American Locomotive-General Electric Companies, at an estimated cost of $605,340, and four 1,500-hp. passenger diesel units from the Electro-Motive Division of General Motors Corporation, at an estimated cost of $710,500. Delivery is scheduled for next February.

The **Wabash** has ordered 30 diesel units costing $8,408,000 for delivery during the first quarter of 1953. The order, described by a spokesman for the road as the final step in the program for complete dieselization, was placed as follows: Electro-Motive Division of General Motors Corporation—two 3,000-hp. freight locomotives (each consisting of two "A" units), two 2,250-hp. passenger units, five 1,500-hp. road-switchers (of which four will be equipped with steam generators for passenger service), and three 1,200-hp. and five 800-hp. switchers; American Locomotive-General Electric Companies—three 1,000-hp. switchers; Fairbanks, Morse & Co. and the Baldwin-Lima-Hamilton Corporation—three 1,200-hp. switchers each; and General Motors Diesel, Ltd.—one 3,000-hp. freight locomotive (consisting of two "A" units), for service in Canada.

PASSENGER CARS

The **Baltimore & Ohio** has ordered three rail diesel cars from the Budd Company. The cars, to be placed in commuter service between Pittsburgh and Versailles, Pa., will replace steam equipment on 14 commuter trains now used in the area. Delivery is scheduled for early 1953.

CONSTRUCTION

Atchison, Topeka & Santa Fe.—Two contracts have been awarded to C. E. Clark of Kansas City, Mo., in connection with separate undertakings in Kansas and Oklahoma. The first covers grading, culverts, bridge piers and associated work in connection with raising a section of third track between HU tower, Kan., and Ottawa Junction. The second involves grading and culvert work in connection with installation of centralized traffic control on the Oklahoma division between Noble, Okla., and Newkirk.

Pennsylvania.—New automatic signals and more track improvements in the Pittsburgh district will be part of the $34,000,000 program which includes the new freight classification yard at Conway, Pa. (*Railway Age*, November 17, page 16), according to J. A. Appleton, PRR vice-president. When the new yard is in operation, he said, most of the traffic from the Panhandle division west of Steubenville, Ohio, will move via Yellow Creek, Ohio, and Rochester, Pa., into Conway, then over the Conemaugh division to Conpitt Junction, just west of Johnstown, Pa. At present this traffic moves via Weirton Junction, Ohio, and Carnegie, Pa., through Pittsburgh South Side to Pitcairn, Pa.

Increased traffic on the River branch through Yellow Creek will require installation of automatic signals in that territory, Mr. Appleton added. It is also planned to build a double-track connection from the mainline to the River branch at Mingo Junction. To handle increased traffic on the Conemaugh division from Federal street, Pittsburgh, to Conpitt Junction, some additional signaling and increase in trackage also will be required.

"When the new Conway yard is completed it will be the railroad's most important freight classification yard," Mr. Appleton pointed out. It will have a capacity of 12,931 cars, compared with the present 8,610 cars and "we will be able to classify 4,000 cars in each direction every 24 hours, as against one-fourth that number at present."

Although the new route for Panhandle division freight will be somewhat longer, it offers a grade of only 0.3 per cent, while the present route has a grade of 1 per cent.

FINANCIAL

Atlanta & Saint Andrews Bay.—*Stock Dividend.*—This road has asked the I.C.C. for authority to issue $2,400,000 of new stock for distribution among present stockholders on a 4-for-1 basis. The road told the commission it presently is "seriously under capitalized." Issuing the additional shares of stock would increase capitalization from $600,000 to $3,000,000. For the past 18 years the road has plowed back earnings into improvements, the application said. It has also paid off all outstanding bonds and has no past due debts or obligations. The road has 6,000 shares of $100 par stock now outstanding, and the present proposal would increase outstanding shares to 30,000.

Baltimore & Ohio. — *Common Stock Dividend.*—Directors of this road have declared a dividend of 75 cents a share on the common capital stock, the first dividend on that issue since 1931. A dividend of $4 a share on the preferred capital stock also was declared. Both dividends are payable December 30 to stockholders of record on November 28.

(*Continued on page* 65)

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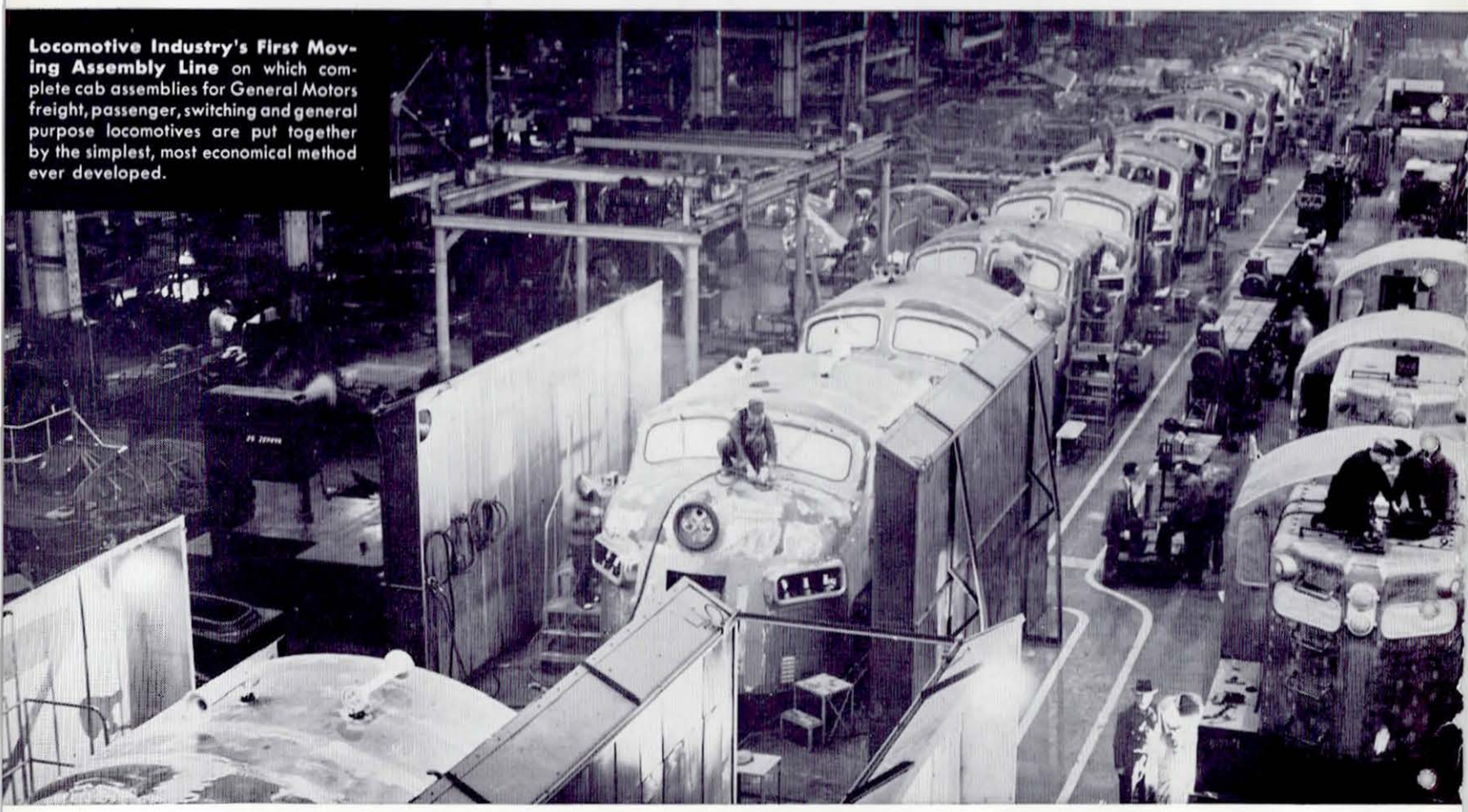
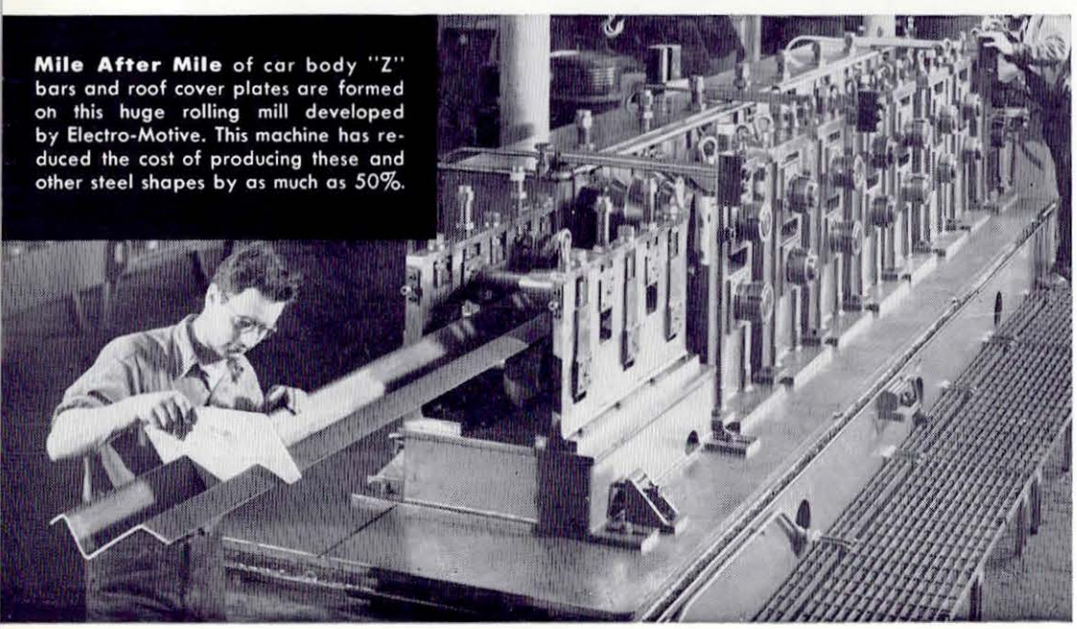
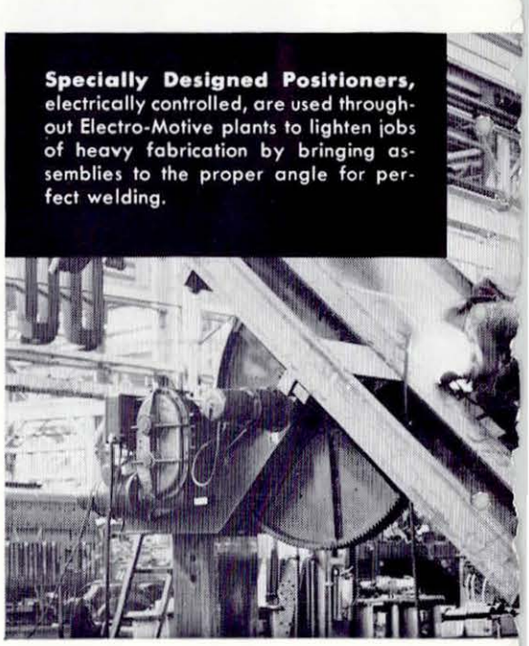


Locomotive Industry's First Moving Assembly Line on which complete cab assemblies for General Motors freight, passenger, switching and general purpose locomotives are put together by the simplest, most economical method ever developed.



Mile After Mile of car body "Z" bars and roof cover plates are formed on this huge rolling mill developed by Electro-Motive. This machine has reduced the cost of producing these and other steel shapes by as much as 50%.



Specially Designed Positioners, electrically controlled, are used throughout Electro-Motive plants to lighten jobs of heavy fabrication by bringing assemblies to the proper angle for perfect welding.

You're Always better off with

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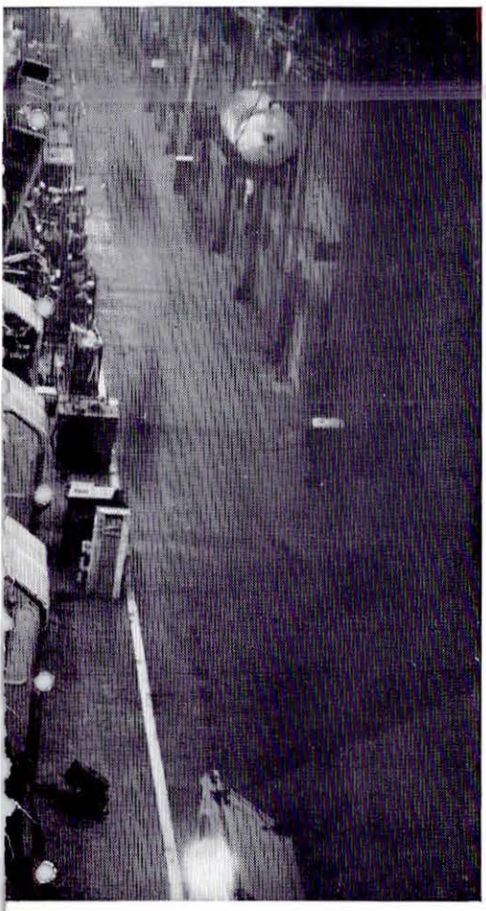

ADVANCED manufacturing methods are only part of the story, of course, but they do help to explain the extra values you find in General Motors Diesel locomotives.

Never-ending development of special-purpose machines, tools and techniques has enabled us not only to build these locomotives in large-scale volume, but to produce a constantly improving product as well. And the task is far from finished.

GM production engineers conduct a continuous search for easier and more efficient ways of doing every job — from the production of raw materials straight through the manufacture of all components to the finished locomotive. Because, as everyone knows, the easier you make it to do a job, the better the job you get.

Here you see a few specialized operations — typical of hundreds at Electro-Motive — where the economies of streamlined mass production are utilized to construct locomotives of top quality at the lowest possible cost.

10 PLUS FEATURES IN ELECTRO-MOTIVE'S LIFELONG SERVICE PROGRAM

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4. **SKILLED TROUBLE-SHOOTING** and maintenance advisory service by a nationwide staff of 150 service engineers and parts specialists.
5. **FACTORY REBUILDING** of major assemblies with same techniques and tooling used in new manufacture.
6. **UNIT EXCHANGE SERVICE**—Prompt delivery of fully rebuilt assemblies in exchange for units needing rebuilding.
7. **PROPER SCHOOLING** of operating and maintenance personnel from the first day General Motors equipment goes on the line.
8. **SPECIAL ENGINEERING** of new and improved parts to make them fit General Motors units of any age.
9. **ONE-YEAR 100,000-MILE GUARANTEE** on Electro-Motive parts and rebuild effective upon installation, *not* the date of shipment.
10. **FACILITIES PLANNING SERVICE**—Expert assistance in helping railroads plan Diesel servicing and parts warehousing facilities.

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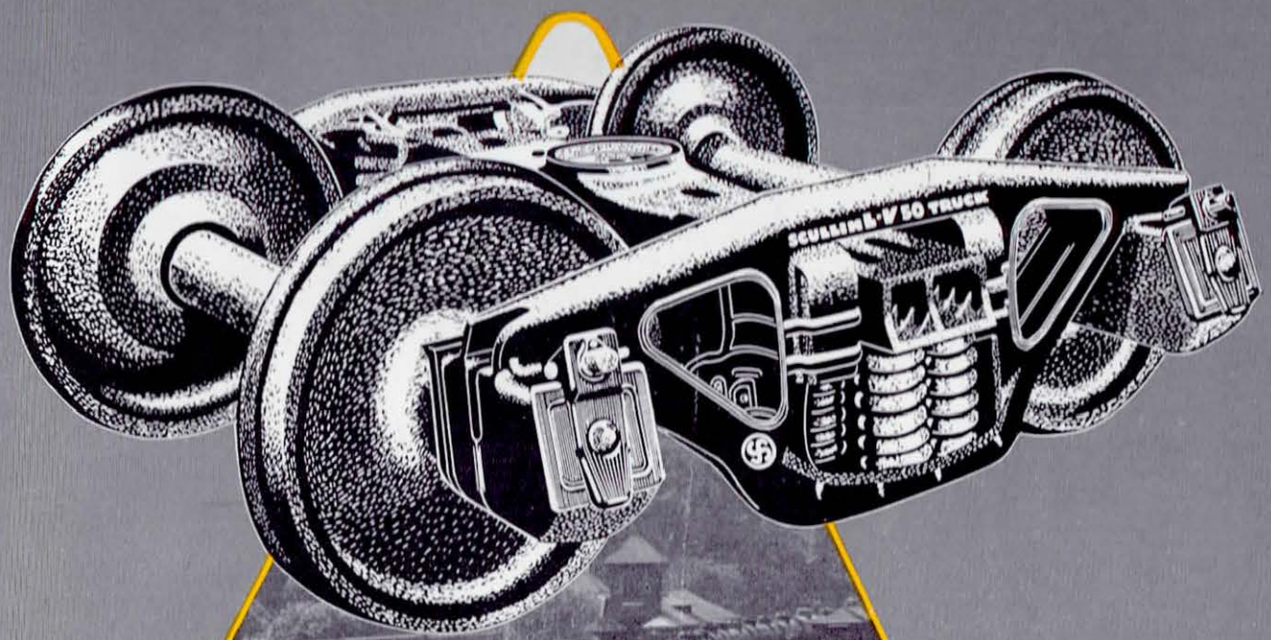

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LITERATURE and PAMPHLETS Offered by *Railway Age* Advertisers

Following is a compilation of literature, pamphlets and data sheets offered free-of-charge by advertisers in the four November issues, and recent manufacturers' announcements. To receive the additional data, merely circle the item number(s) on the card below.

977. Steel Pins and Bushings
Ex-Cell-O Corporation. Bulletin #32428 gives a complete listing of standard Ex-Cell-O pins and bushings for diesel and steam locomotives and passenger car equipment.

978. Flame-Hardening Process
Oxweld Railroad Service Company Div. Union Carbide and Carbon Corp. Booklet F7007 gives complete information on Oxweld's flame-hardening process in reducing maintenance costs on frogs and crossings.

979. Fire Protection Equipment
C-O-Two Fire Equipment Company. Complete factual data offered on the C-O-Two line of fire protection equipment.

980. Electroforged Steel Crossings
Blaw-Knox Division Blaw-Knox Company. Bulletin #2395 describes railroad applications of Blaw-Knox grating, including steel crossings, running boards, and steps.

981. Wrought Iron Pipe
A. M. Byers Company. Bulletin "Wrought Iron for Radiant Heating" gives the complete story and illustrates applications of Byers Wrought Iron Pipe.

982. Reflective Sheeting
Minnesota Mining & Mfg. Co. Complete information offered on Scotchlite Reflective Sheeting for signs and signals in booklet "Reflect and Protect".

983. Resins and Plastics
Bakelite Company Division Union Carbide and Carbon Co. Booklet "Vinylite Resins and Plastics—Their Forms, Properties, Applications" gives details on Vinylite Brand Resins and Plastics.

984. Pressure-Creosoted Posts
Koppers Company, Inc. The C & O report to AWPA gives details on use of pressure-creosoted posts along C & O right-of-way near Richmond, Virginia. Also, additional information on Koppers Pressure-Creosoted Posts. *Please specify.*

985. Welding and Cutting
Air Reduction Company, Inc. Catalog 5, Regulators, and Catalog 12, Supplies, give complete description of the Airco line of welding and cutting products.

986. Solid Journal Bearings
Magnus Metal Corp. subs. National Lead Co. Booklet "The Facts About AAR Solid Journal Bearings" gives data about standard solid journal bearings.

987. Industrial Trucks
Hyster Company. Literature available on any of the Hyster line of materials handling equipment, including: Karry Krane, fork-type Lift Trucks, Turret Trucks and Straddle Trucks. *Please specify.*

988. Filing Systems
Remington Rand, Inc. 40-page booklet "How to Simplify Your Files and Filing Systems" gives many practical filing procedures.

989. Railroad Radio
Westinghouse Electric Corp. Complete information available on the Westinghouse FE Railroad Radio.

990. Office Duplicating Machine
Ozalid Div. General Aniline & Film Corporation. Full information offered on the Ozamatic machine, the desk top direct copy machine.

991. Fork Lift Trucks
Mobilift Corporation. Complete specifications offered on Mobilift Stand-Up or Sit-Down type fork lift trucks with Lev-R-Matic Drive.

992. Conveyor Units
Standard Conveyor Company. Special bulletin Handidrive 1000 Series describes the Handidrive pre-built power conveyor units; Bulletin 63B describes Standard gravity and power conveyor units. *Please specify.*

993. Lanterns
Star Headlight & Lantern Company. Catalog No. 52 describes the lightweight, waterproof, rust-resistant twin bulb lantern Star Model 204-2BHB as well as the complete line of Star lanterns.

994. All-Steel Gondola Cars
Chicago Freight Car & Parts Company. Specification sheet offered giving complete data on heavy duty mill type all steel gondolas.

995. Switch Stands
Bethlehem Steel Company. Complete details offered on the Model 51 New Century Switch Stand.

(Continued first column reverse side)

Additional Product Information

This is a complete list of products mentioned in the ads in this issue. For data on any product shown, circle the page number(s) on the reply cards below, fill in and mail. *Note:* If the advertiser mentions more than one product, or if more than one ad appears on the page, write in the name of the product.

	Page
B	
Batteries	73
Black Tape	69
Bolsters	32
Bolts, Track	3
Books, Railroad	69, 70
Bottom Rods	66
Brackets	66
Brake Beams, Cast Steel	26
Bushings	37
C	
Car and Engine Oil	2
Car Hoods, Hopper	66
Cars, Rail	24
Carbon Dioxide Fire Extinguishers	38
Cast Steel Brake Beams	26
Cast Steel Truck Frames	32
Center Sills	66
Chemical Cleaner	67
Couplers	26
Cranes, Locomotive	70
Cross Bearers	66
Crossings	28, 36, 69
Crossings, Manganese Steel	28
Crossings, Steel	36
D	
Diesel Locomotives	24
Diesel Lubricants	2
Diesel Switchers	24
Doors, Steel	1
Dry Chemical Fire Extinguisher	38
E	
Electrical Machinery	24
Electroforged Steel Grating	36
Engine Oil	2
Extinguishing Systems, Fire	38
Eye Protectors	23
F	
Fasteners, Railroad	3
Filter, Respirator	23
Fire Extinguishing Systems	38
Fire Protection Equipment	38
Flame-Hardening Process	31
Flooring, Nailable Steel	34
Frames, Truck (cast-steel)	32
Frogs	69

(Continued third column reverse side)

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BUSINESS REPLY CARD
First Class Permit No. 153 (Sec. 34.9, P.L.&R.), New York, N.Y.

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RAILWAY AGE
30 Church Street
Reader Service Dept. **New York 7, New York**

RAILWAY AGE November 24, 1952

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32 33 34 36 37 38 59 62 66 67 69 70 71 72 73 74

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977 978 979 980 981 982 983 984 985 986 987 988 989 990
991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004
1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018

On pages....., I desire data on .....only!
product (s)

Name & Title .....

Company .....

Address .....

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LITERATURE & PAMPHLETS

996. Tamping Equipment
Electric Tamper & Equipment Co. Complete information furnished on the Jackson Multiple Tamper that reaches beneath the rails.

997. Chemical Wood Preservative
The Dow Chemical Company. Complete technical information offered on Penta—the chemical type wood preservative.

998. Petroleum Products
Standard Oil Company of California. Catalog "How to Save Money on Equipment Operation"; and, information on RPM Delo Oil R.R. or other petroleum products. *Please specify.*

999. Railroad Batteries
Gould-National Batteries, Inc. Full information on the Gould Plus-Performance Plan showing how to conserve and extend battery power.

1000. Radio Power Supply for Cabooses
Federal Telephone and Radio Corporation. Complete information offered on the new 12-volt DC radio power supply (M322-1) for the 12-volt DC caboose electrical system, eliminating AC converters.

1001. Trap Doors & Retractible Steps
O. M. Edwards Co., Inc. Specifications and complete data on Edwards streamlined trap doors and retractible steps.

1002. Rust Preventative
Rust-Oleum Corporation. Catalog describes rust preventative for rolling stock, metal buildings, bridges and signal equipment.

1003. Gun Iron
Hunt-Spiller Mfg. Corp. "Bulletin on Modern Metallurgy" is a 24-page practical guide for the user of iron and steel castings, giving technical data on many types of metals and alloys.

1004. Air Conditioning Units
Waukesha Motor Company. Bulletin available on the Waukesha line of mobile, engine-driven Refrigeration and Generator Equipment, including propane-powered air conditioning and Enginator units, and ice engines. *Please specify.*

1005. Engine Driven D-C Welder
Westinghouse Electric Corporation. Full information on the Westinghouse D-C engine-driven welder with A-C power take-off.

1006. Photography in Industry
Eastman Kodak Company. Booklet "Radiography as a Foundry Tool" available describes Radiography as an important function of photography in industry.

1007. Cold Process Roofing
The Lehon Company. Booklet with complete details and specifications for laying Mule-Hide Cold Process roofs.

1008. Air Dump Cars
Differential Steel Car Company. Complete information offered on the Differential Air Dump Car, the car that can dump in two directions.

1009. Water Coolers & Refrigerators
E. W. Mink & Associates, Inc. Data sheets offered describe in full detail the Models #15 and #17 water coolers and refrigerators for diesel locomotives, postal cars, baggage cars and cabooses.

1010. Cleaning Methods
Oakite Products, Inc. 4-page bulletin gives complete details about the Oakite Renovator cleaning method.

1011. Flexible Shaft Equipment
Franklin Railway Supply Co. Catalogs and bulletins on: wire brushes, abrasive and grinding attachments, buffing and rubbing attachments, rotary files and cutters, single and three-speed countershaft and 4-speed "Strandflex" gear type flexible shaft equipment. *Please specify.*

1012. Plastic Eye Protective Equipment
Willson Products, Inc. Bulletin available describing the Willson line of eye protection equipment, including the Monogoggles, Protecto-Shield, and Featherspec.

1013. Paper Cups & Dispensers
Dixie Cup Company. Complete details offered on the variety of Dixie paper cups and dispensers for railroad use.

1014. Safety Goggles
American Optical Company. Booklet "Improved Industrial Vision" outlines AO's Industrial Vision Program.

1015. Insulated Wire
American Steel & Wire Div. United States Steel Company. Complete information offered by American on U.S.S. Ampyrol special purpose insulated wire.

1016. Refrigerator Car Insulation
American Hair & Felt Company. Complete data on Streamlite Hairinsul all-hair refrigerator car insulation.

1017. Lamps and Lanterns
The Adams & Westlake Company. Complete information offered on the Adlake line of lamps and lanterns, including the Adlake oil switch lamps.

1018. Plywood
Douglas Fir Plywood Association. Information available on the variety of uses of Douglas Fir Plywood.

Additional Product Information

	Page
G	
Glass Fiber Insulation	59
Goggles	23
Grab Irons	66
Grating, Electroforged Steel	36
H	
Hinges	66
Hoods, Hopper Car	66
Hooks	66
I	
Insulation, Glass Fiber	59
J	
Jaws	66
Journal Lubricants	2
L	
Levers	66
Locomotive Cranes	70
Locomotives, Diesel	24
Lubricants, Diesel	2
M	
Maintenance Parts	66
Manganese Steel Crossings	28
Microfilm "Reader"	23
Motor Trucks	32
N	
Nailable Steel Flooring	34
P	
Pins	66
Pins & Bushings, Steel	37
Prefabricated Metal-Wood Units	10
Protectors, Eye	23
Pumps	24
Push-Pole Pockets	66
R	
Rail Cars	24
Railroad Books	69, 70
Remote Control System	74
Respirator Filter	23
Rolling Stock Equipment	66
Running Boards	36
Rust Preventative	67
S	
Scales	24
Snubbers	26
Steel & Steel Products	3, 72
Steel Crossings	36
Steel Doors	1
Steel Springs	19
Steel Steps	36
Stringers	66
Switchers, Diesel	24
Switches	69
T	
Tapes (Incl. Black)	69
Track Bolts	3
Track Maintenance Equipt.	9
Track Material	69
Trucks	26, 32, 62
Truck Frames, Cast Steel	32
U	
Underframe	66
W	
Water Treatment	67
Welding Service, Oxy-Acetylene	31
Wheels, Wrought Steel	30
Wood & Wood Products	10

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On pages....., I desire data on .....only!
product (s)

Name & Title .....

Company .....

Address .....

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(Continued from page 58)

Kansas City Southern. — *Stock Split.* — A two-for-one split of both common and preferred stocks was voted by the board of directors at its November meeting. Approval of stockholders will be sought at a special meeting to be held within the next month.

New Orleans & Northeastern.—*Acquisition.*—In separate applications filed with the I.C.C., this road seeks authority to acquire control of the New Orleans Terminal Company and the Louisiana Southern. The Northeastern is controlled by the Southern, as is another of the roads, the New Orleans Terminal.

Northeastern would pay $2,000,000 for the Terminal Company, and would acquire all 20,000 shares of the latter's stock. The road said the price of $100 per share is justified because Terminal Company earnings have averaged $201,453 a year over the past 10 years. Sale of this property is one of the Southern's initial moves to obtain funds for meeting heavy bond maturities over the next four years.

Acquisition of the LS, an independent road, would be accomplished through purchase by Northeastern of 8,995 shares of LS stock. A total of 10,000 shares are outstanding, most of which are foreign owned. Holders of 8,995 shares already have agreed to sell to Northeastern for $110 per share. Additional shares would be purchased at the same price if offered within 30 days of the date the I.C.C. approves the acquisition.

The LS is a 14.6-mile single-track line, extending from Braithwaite, La., to a connection with the New Orleans Terminal at Slip Junction. Northeastern said its acquisition of the property would affiliate the LS with a strong trunk-line carrier and thus insure "the future industrial development of the area." The LS affords access to the best industrial sites still existing in the New Orleans area, the Northeastern said.

New Securities

Application has been filed with the I.C.C. by:

DETROIT & TOLEDO SHORE LINE.—To issue and sell $3,000,000 of first mortgage series A bonds, proceeds from which would be used to retire a like amount of outstanding first mortgage 4 per cent gold bonds, due January 1, 1953. The new issue, dated December 1, 1952, would mature December 1, 1982. The bonds would be sold at competitive bidding, with the interest rate to be set by such bids. The Grand Trunk Western and the New York, Chicago & St. Louis joined in this application to the I.C.C. They seek authority to assume joint liability for the new D&TSL bonds, and to guarantee sinking fund and interest payments.

GARDEN CITY WESTERN.—To issue and sell 500 shares of its $100 par stock, proceeds from which would be used to acquire a 600-hp. diesel switching unit from the Electro-Motive Division of General Motors Corporation. Estimated cost of the locomotive is $79,900. The new stock would be sold at $154 per share to the Garden City Company. The GCW extends from Garden City, Kan., to Wolf, approximately 14 miles.

NEW ORLEANS TERMINAL COMPANY.—To issue and sell $8,000,000 of first mortgage bonds, proceeds from which would be used to help refund $11,423,000 of outstanding first mortgage bonds due July 1, 1953. The new bonds, to be dated November 1, 1952, would mature November 1, 1977. They would be sold by competitive bidding, with the interest rate to be set by such bids. The Southern asked the I.C.C. for authority to assume joint liability for the new bonds.

Additional funds needed to retire the outstanding bonds would be advanced by the New Orleans & Northeastern or the Southern, depending on whether the I.C.C. permits Northeastern to buy the Terminal Company. Paying off the terminal company bonds in this way is part of the Southern's overall plan for meeting bond maturities totaling $89,755,000 between now and November 1, 1956.

NORTH PENNSYLVANIA.—To issue and sell $6,000,000 of mortgage bonds, proceeds from which would be used to retire a like amount of outstanding bonds due January 1, 1953. The new bonds, dated December 1, 1952, would mature December 1, 1972. They would be sold by competitive bidding, with the interest rate to be set by such bids.

The Reading, which leases all NP trackage, asked the I.C.C. for authority to assume joint liability for the new bonds. NP bonds due January 1 include $1,500,000 of 3½ per cent bonds, and $4,500,000 of 3.3 per cent general mortgage bonds.

NORTHERN PACIFIC.—To assume liability for $6,375,000 of equipment trust certificates, to finance in part 1,250 freight cars and eight diesel units costing an estimated $8,002,750.

	Description and Builder	Estimated Unit Cost
1,000	50-ton wood-lined box cars (company shops)	$ 5,519
250	70-ton solid-bottom gondola cars (American Car & Foundry Co.)	5,775
3	1,600-hp. road-switchers (American Locomotive-General Electric Companies)	155,000
3	1,000-hp. road-switchers (Alco-G.E)	105,000
1	1,500-hp. road-switcher (Electro-Motive Division, General Motors Corporation)	155,000
1	1,200-hp. road-switcher (Electro-Motive)	105,000.

The certificates, to be dated December 16, would mature in 15 annual installments of $425,000 each, beginning December 16, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

SEABOARD AIR LINE.—To assume liability for $5,700,000 of series M equipment trust certificates to finance in part 600 freight cars and 31 diesel units costing an estimated $7,578,200.

	Description and Builder	Estimated Unit Cost
300	50-ton high-side gondola cars (Pullman-Standard Car Manufacturing Company)	$ 5,297
300	50-ton low-side gondola cars (Pullman-Standard)	5,197
4	1,200-hp. yard switchers, equipped for passenger-train service (Baldwin-Lima-Hamilton Corporation)	123,069
2	1,200-hp. yard switchers (B.-L.-H.)	103,052
10	1,000-hp. yard switchers (American Locomotive-General Electric Companies)	102,957
10	1,500-hp. road freight switchers (Electro-Motive Division, General Motors Corporation)	152,870
5	2,250-hp. passenger units (Electro-Motive)	234,670

The certificates, to be dated December 1, would mature in 30 semiannual installments of $190,000 each, beginning June 1, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

SPOKANE INTERNATIONAL.—To issue $290,000 of promissory notes, to reimburse the road for expenditures made for construction, additions and improvements over the past three years. One note, for $210,000, would be dated December 1, bear interest at 4½ per cent, and mature in seven annual installments of $30,000 each, beginning December 1, 1956. The other note, for $80,000, would carry the same date and interest rate. It would mature in three annual installments, beginning December 1, 1953. The first payment would be $20,000, and the remaining two would be $30,000 each.

The road also seeks authority to issue $290,000 of series B, 6 per cent income mortgage bonds. These would be dated December 1, 1952, and would mature December 1, 1982. They would be pledged as security for the $210,000 promissory note.

Dividends Declared

ALBANY & VERMONT.—$1.25, payable November 15 to holders of record November 1.

BALTIMORE & OHIO.—common, 75¢; preferred, $4, both payable December 30 to holders of record November 28.

CHICAGO, ROCK ISLAND & PACIFIC.—common, $1; 5% preferred, series A, $1.25, quarterly, both payable December 26 to holders of record December 12.

DELAWARE & BOUND BROOK.—50¢, quarterly, payable November 20 to holders of record November 13.

ERIE & PITTSBURGH.—7% guaranteed, 87½¢, quarterly, payable December 10 to holders of record December 1.

GULF, MOBILE & OHIO.—common, 50¢, payable December 26 to holders of record December 6; preferred, $1.25, payable June 30, 1953, to holders of record June 10.

NORTH PENNSYLVANIA.—$1, quarterly, payable November 25 to holders of record November 18.

ST. LOUIS-SAN FRANCISCO.—50¢, payable December 15 to holders of record December 1.

VIRGINIAN.—62½¢, quarterly, payable December 23 to holders of record December 9.

Security Price Averages

	Nov. 18	Prev. Week	Last Year
Average price of 20 representative railway stocks	63.14	64.18	53.18
Average price of 20 representative railway bonds	93.21	93.22	90.69

RAILWAY OFFICERS

EXECUTIVE

S. E. Mounes has been appointed executive vice-president of the APACHE at Flagstaff, Ariz. **Bruce E. Swartout,** vice-president and general manager, will continue as general manager, with headquarters as before at McNary, Ariz. Mr. Mounes was formerly with the Southern Pine Association and the Illinois Central.

E. L. Smith has been appointed assistant to vice-president — operation of the TEXAS & PACIFIC at Dallas.

FINANCIAL, LEGAL & ACCOUNTING

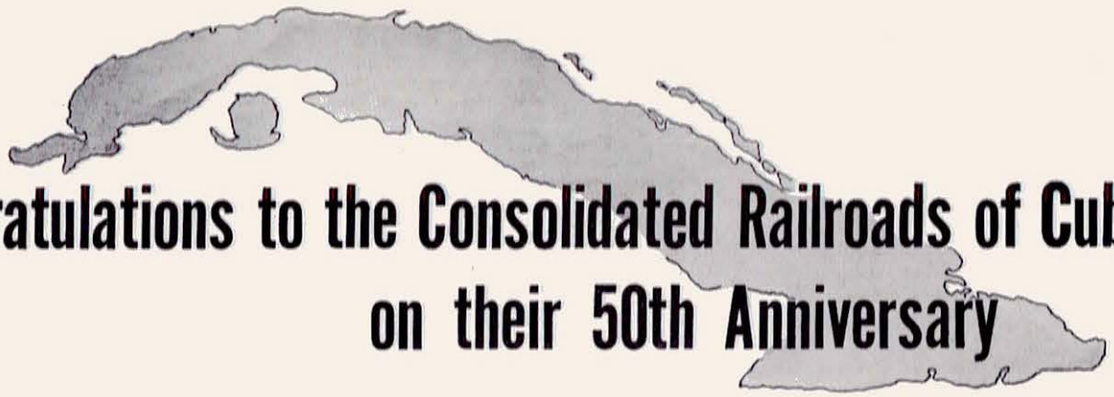
R. M. Hood, assistant general claim agent of the GULF, COLORADO & SANTA FE has been appointed freight claim agent at Galveston, Texas.

Joseph L. Lhotka, supervisor in the office of the auditor of disbursements of the PULLMAN COMPANY, Chicago, has been appointed to the recently created position of assistant auditor of receipts.

James S. Cunningham, secretary of the board of pensions of the SOUTHERN PACIFIC, has retired after nearly 50 years of service.

L. Courtney has been elected comptroller and **H. J. Grance** secretary and treasurer of the NEWBURGH & SOUTH SHORE, LAKE TERMINAL, DONORA SOUTHERN, MCKEESPORT CONNECTING, NORTHAMPTON & BATH and HANNIBAL CONNECTING at Pittsburgh. Mr. Grance has been treasurer and general purchasing agent of these roads and Mr. Courtney has been comptroller of the BESSEMER & LAKE ERIE at Pittsburgh. **H. Frantzen, Jr.,** assistant to comptroller of the UNION at Pittsburgh, and **Paul C. Major,** assistant secretary and assistant comp-

(Continued on page 68)



Congratulations to the Consolidated Railroads of Cuba on their 50th Anniversary

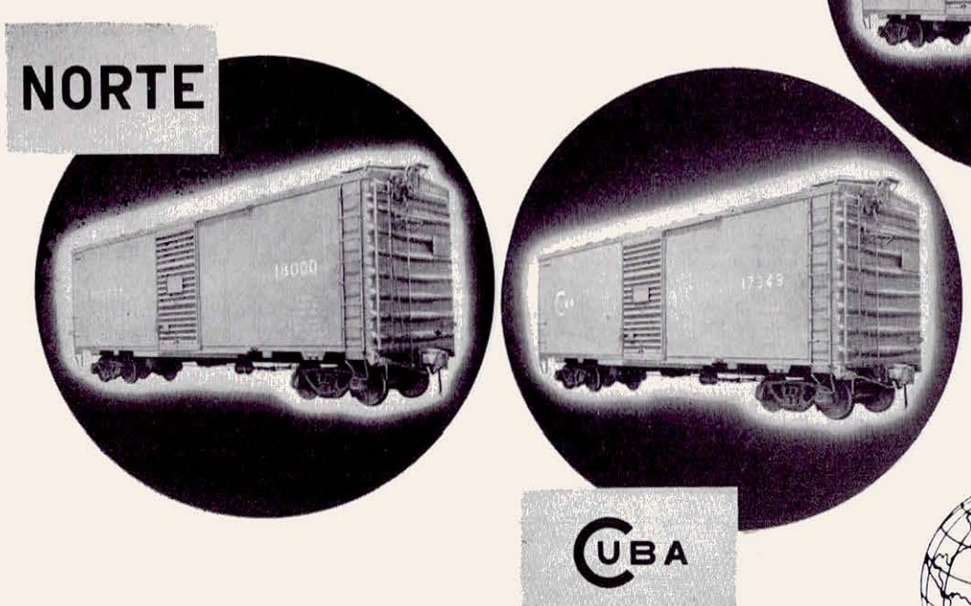
John I Snyder, Jr., President

Pressed Steel Car Company, Inc.

We salute the CONSOLIDATED RAILROADS OF CUBA on the Fiftieth Anniversary of the establishment of railroad service between Las Villas and Oriente.

A far-sighted management policy . . . constant improvement and strict maintenance of roadbeds and physical properties . . . loyal cooperation of employees . . . acquisition of the most modern rolling stock and other equipment . . . have all helped the Cuban railroads give first-class service to the communities and industries which they serve.

We at Pressed Steel Car Company are proud of the part we play in supplying rolling stock equipment to the Consolidated Railroads of Cuba.

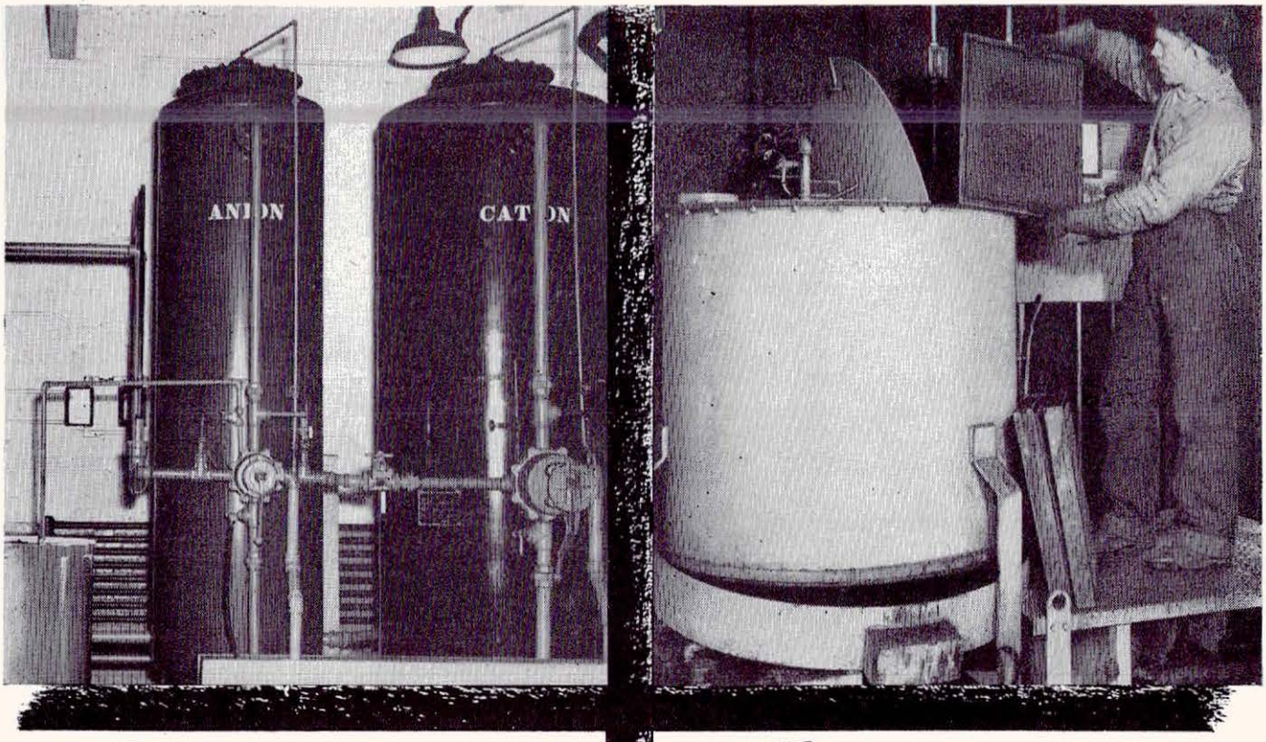


PSC Steelcar

PRESSED STEEL CAR COMPANY, INC.

Export Division, 25 Broad Street, New York 4, N. Y.

use Dearborn TWO-WAY Maintenance



1. Cooling Water for Diesels and Steam Generators

Whatever your needs in mineral-free, non-corrosive cooling water—for Diesels, steam generators or any other use—Dearborn will:

- engineer and install the entire de-ionizing, zeolite or softening system;
- furnish the proper finishing treatment;
- establish simple, inexpensive test procedure.

2. Dearborn Cleaners for Every Railroad Need

Make your equipment last longer, look better—and at the same time substantially reduce maintenance expense. The complete Dearborn line includes detergent cleaners and organic solvents designed for internal and external cleaning of locomotives and cars, for cleaning and degreasing electrical equipment, for hot tank application and for scale removal.

DEARBORN CHEMICAL COMPANY • Merchandise Mart Plaza • Chicago 54, Ill.

Consult Your Dearborn Engineer

Your Dearborn Engineer is at your service . . . to prolong the life of equipment, to reduce maintenance expense. There is no obligation.

DEARBORN CHEMICAL COMPANY
Dept. RA, Merchandise Mart Plaza
Chicago 54, Ill.

I would like to discuss the Dearborn Two-Way Maintenance Program with a Dearborn Engineer.

Name.....

Position.....*Railroad*.....

Address.....

City.....*State*.....

Dearborn
TRADE MARK REGISTERED
THE LEADER IN WATER TREATMENT AND RUST PREVENTIVES

(Continued from page 65)
troller of the six roads mentioned above, have been appointed assistant comptrollers of these roads. **W. T. Elwood** has been named assistant treasurer of the six roads. **A. B. Prentice,** assistant treasurer and assistant secretary of the Newburgh & South Shore, has been appointed assistant secretary of these roads, with the exception of the Hannibal Connecting.

TRAFFIC

Soo Line Creates a Freight Service Division

To provide closer supervision over such freight service matters as tracing, diversion, reconsignment, car supply, etc., the Soo Line has created a freight service division within the framework of its freight traffic department. Heading the new organization in the newly created position of freight service manager is K. H. Peterson, former general agent at Cleveland. H. E. Benson continues as freight traffic manager—sales, with jurisdiction over all matters pertaining to solicitation.

Another change in the freight traffic department is the establishment of a new rate office at Chicago. Effective December 1, K. J. Sherwood goes to Chicago as general agent—rates and

K. H. Peterson

divisions, to head the new office. Other personnel changes in the department include the following:

Ben G. Spears, assistant freight traffic manager at Minneapolis, is appointed assistant to vice-president—traffic; Richard F. Ronnan, assistant general freight agent, Minneapolis, is appointed assistant freight traffic manager—sales, at that same point; J. C. Webber, assistant to vice-president—traffic, becomes assistant general freight agent—rates; F. R. Crow, general agent at Winnipeg, becomes assistant general freight agent—sales, at Milwaukee; W. C. Giese, assistant general freight agent at Milwaukee, moves to Minneapolis as general freight agent—sales; E. E. Widmer, traveling freight agent at Milwaukee, moves to Winnipeg to replace Mr. Crow; and F. L. Meyer, traveling freight agent at New York, is appointed general agent at Cleveland, succeeding Mr. Peterson.

Mr. Peterson started work with the Soo as a stenographer in the general traffic department in 1938. After a few years in various clerical positions, he was transferred to the Minneapolis commercial office, where he remained until being promoted to traveling freight agent at Cleveland in 1948. He was appointed general agent at that point in May 1951.

John P. Pearson has been appointed general agent of the CHICAGO, BURLINGTON & QUINCY at Grand Forks, N.D.

A. J. Bouchonville, whose appointment as assistant traffic manager of the ELGIN, JOLIET & EASTERN was reported in *Railway Age* October 20, page 56, entered railroad service in 1917 as a mail clerk for the Monon. Later that same year he joined the EJ&E as an office boy, rising to the position of traveling freight agent in 1934. In 1945 he was appointed commercial agent, and in 1948 was named general freight agent, the position he held at the time of his recent promotion.

OPERATING

A. J. Farnham, division superintendent of the MILWAUKEE, has been appointed chief train rules examiner at Milwaukee, succeeding **C. X. Pack,** who has retired.

As *Railway Age* reported September 29, **A. C. Kohlhase,** superintendent of the Rocky Mountain division of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC, has retired after 42 years of service. He has been succeeded by **James T. Hayes,** superintendent at

James D. Shea

Miles City, Mont. **James D. Shea,** assistant superintendent at Perry, Iowa, has been named superintendent of the Trans-Missouri division at Miles City.

Mr. Kohlhase began his service with the Milwaukee in 1910 as a telegraph operator at Miles City. Afterwards he was train dispatcher and chief dispatcher there. He went to Butte in 1926 as trainmaster, in 1937 returned to Miles City as division superintendent, and three years later transferred to the Rocky Mountain division at Butte.

Mr. Shea worked for the Milwaukee during school vacations from 1923 to 1928 as timekeeper or assistant foreman with track crews. He entered the engineering department at Milwaukee in 1929, served as roadmaster from 1934 to 1937, and from that time until 1943 was trainmaster successively at Madison, Wis.; Aberdeen, S.D.; and Montevideo, Minn. After serving in the army as a lieutenant colonel from 1943 until 1946, he returned to the Milwaukee as trainmaster at Chicago. He was appointed assistant superintendent at Sioux City, Iowa, in 1947 and in 1951 transferred to Perry.

OBITUARY

William Burney Harris, 59, superintendent of the Suggestion Bureau of the RAILWAY EXPRESS AGENCY at New York, died on November 12 at the Mt. Vernon (N. Y.) hospital, after a short illness.

Frank J. Jumper, 75, who retired in January 1948 as general mechanical engineer of the UNION PACIFIC at Omaha, died on October 30.

Stanley W. Todd, 67, who retired in 1950 as editor of publications of the RAILWAY EXPRESS AGENCY at New York, died on November 9 at his home in Wannamassa, N. Y., after a long illness.

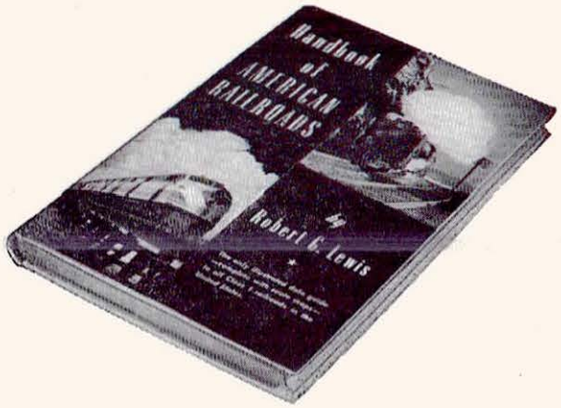
Andrew M. Parker, 60, who retired in 1950 as general agent of the CANADIAN PACIFIC at Shanghai, China, died at Victoria, B.C., on November 15.

W. L. Peoples, 56, district engineer of the Wheeling & Lake Erie district of the NEW YORK, CHICAGO & ST. LOUIS (NICKEL PLATE) died on November 7 at his home in Massillon, Ohio, after an illness of two months.

Robert N. Nash, former assistant to vice-president, Traffic Department, ASSOCIATION OF AMERICAN RAILROADS, died November 16 at his home in Arlington, Va. Mr. Nash, who was in his 73rd year, retired from the A.A.R. position in February 1950. He went to the A.A.R. in 1934 from the St. Louis-San Francisco, where he was freight traffic manager.

Charles Tranter, superintendent of transportation of the NORTHERN REFRIGERATOR LINE, died on November 2.

Hugh I. Scofield, 66, general agent of the DENVER & RIO GRANDE WESTERN at Sacramento, Cal., died there on October 25. Mr. Scofield served as passenger traffic manager at Denver, Colo., from February 1935 to November 1947.



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by ROBERT G. LEWIS

Transportation Editor, *Railway Age*

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For Each of 127 Railroads, HANDBOOK OF AMERICAN RAILROADS bring you:

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2. Photo of Famous Train
3. Herald (if used)
4. Historical Sketch
5. Brief Biography of the Chief Officer
6. Latest Financial and Operating Statistics
7. Latest Equipment Data
8. Many Other Highly interesting Statistics Collected Here for the First Time

Now you can get—for the first time under one cover—official up-to-date facts on 127 Class I railroads. Specially-drawn maps show the route of each road. Beautiful action photos of crack trains such as Twin Cities Zephyr, The Red River, The Inter-City Limited, and dozens more fill the book.

This means convenience for the railroad executive, fun for the railfan, and—for everyone concerned with railroads—a tremendous gain in railroad knowledge that only a vast accumulation of facts like this makes possible.

265 p. 5½ x 8½ 375 ill. board $2.95

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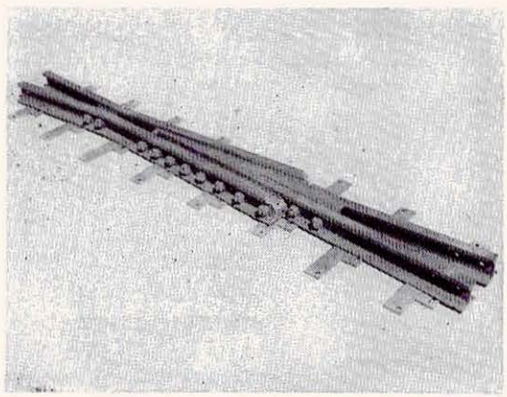

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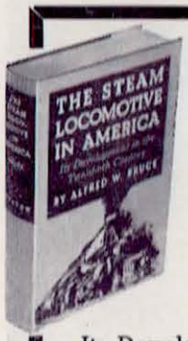

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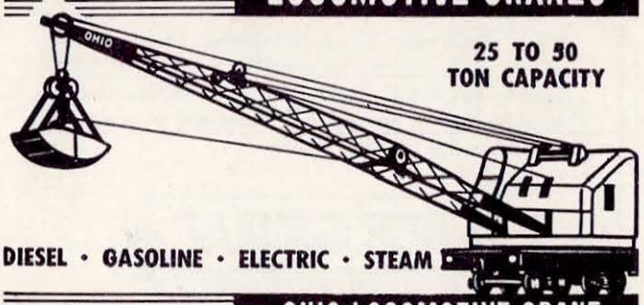

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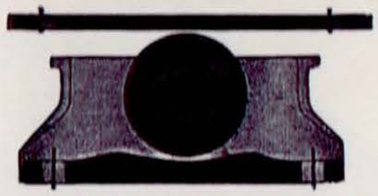

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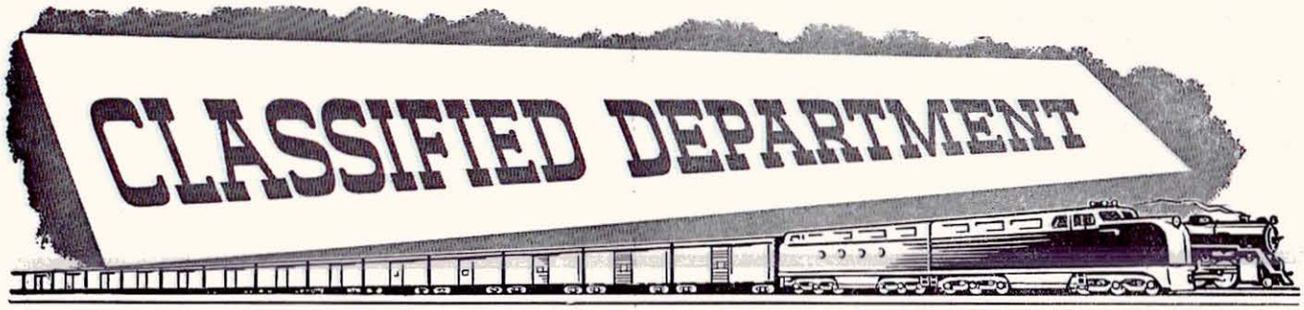

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American Locomotive Company 20, 21
Agency—G. M. Basford Company

American Locomotive Company, Railway Steel-Spring Division 19
Agency—Hazard Advertising Company

American Optical Company 23
Agency—Sutherland-Abbott

American Steel Foundries 26, 27
Agency—Erwin, Wasey & Company, Inc.

Armco Steel Corporation 30
Agency—N. W. Ayer & Son, Inc.

Bethlehem Steel Company 3
Agency—Jones & Brakeley, Inc.

Blaw-Knox Company 36
Agency—Al Paul Lefton Co., Inc.

Columbia-Geneva Steel Division 28, 29
Agency—Batten, Barton, Durstine & Osborn, Inc.

C-O-Two Fire Equipment Company 38
Agency—G. M. Basford Company

Dearborn Chemical Company 67
Agency—The Buchen Company

Edgewater Steel Company 22
Agency—Walker & Downing

Electric Storage Battery Co., The 73
Agency—Geare-Marston, Inc.

Electro-Motive Division, General Motors Corporation 60, 61
Agency—Kudner Agency, Inc.

Ex-Cell-O Corporation 37
Agency—Holden, Clifford, Flint, Inc.

Fairbanks-Morse & Co. 24, 25
Agency—The Buchen Company

General Electric Company 20, 21
Agency—G. M. Basford Company

General Railway Signal Company ..... Back Cover

General Steel Castings 32, 33
Agency—Oakleigh R. French & Associates

Glazer Steel Corp. 70

Great Lakes Steel Corporation 34
Agency—Campbell-Ewald Company, Inc.

Gustin-Bacon Manufacturing Co. 59
Agency—Valentine-Radford Advtg.

Iron & Steel Products, Inc. 71

Luria Steel and Trading Corp. 70

Matisa Equipment Corporation 9
Agency—W. S. Kirkland Advertising

Met-L-Wood Corporation 10
Agency Armstrong Advertising Agency

Midland Reclamation Co. 70

National Steel Corporation 34
Agency—Campbell-Ewald Company, Inc.

Nelson Iron Works, Inc. 69
Agency The Burke Company

Norton & Company, W. W. 70
Agency Denhard & Stewart, Inc.

Ohio Locomotive Crane Co., The 70
Agency—Coleman Todd & Assoc.

Okonite Company, The 69
Agency—Doyle, Kitchen, & McCormick, Inc.

Oxweld Railroad Service Company, Division of Union Carbide and Carbon Corporation 31
Agency J. M. Mathes, Inc.

Pressed Steel Car Company, Inc. 66
Agency—Albert Frank-Guenther Law, Inc.

Railway Educational Bureau Inc. 71

Railway Steel-Spring Division, American Locomotive Company 19
Agency—Hazard Advertising Company

Ryerson & Son, Inc., Joseph T. 72

Scullin Steel Co. 62
Agency—Batz-Hodgson-Neuwoehner Advertising Agency

Simmons-Boardman Publishing Corporation 63, 64, 69

Stucki Co., A. 70

Tennessee Coal & Iron Division 28, 29
Agency—Batten, Barton, Durstine & Osborn, Inc.

Texas Company, The 2
Agency—Erwin, Wasey & Company, Inc.

Union Carbide and Carbon Corporation, Oxweld Railroad Service Company 31
Agency—J. M. Mathes, Inc.

Union Switch & Signal 6
Agency—Ketchum, MacLeod & Grove, Inc.

United States Steel Company 28, 29
Agency—Batten, Barton, Durstine & Osborn, Inc.

United States Steel Export Company 28, 29
Agency—Batten, Barton, Durstine & Osborn, Inc.

Westinghouse Air Brake Company 4
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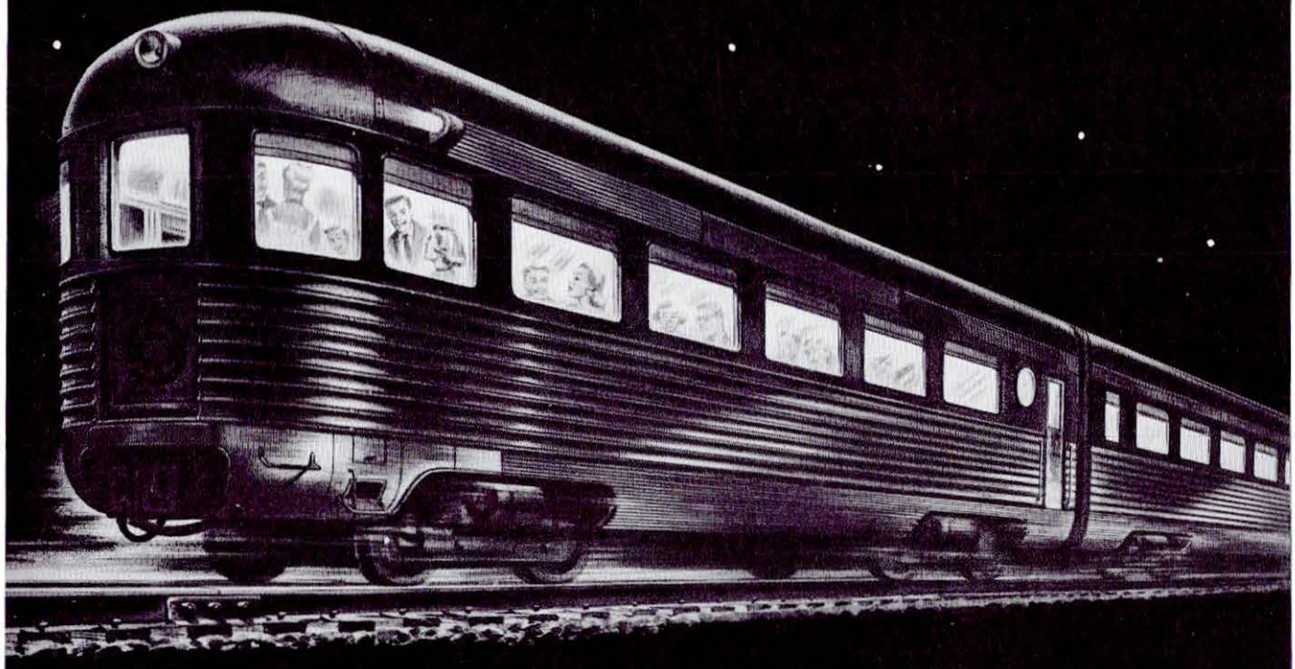

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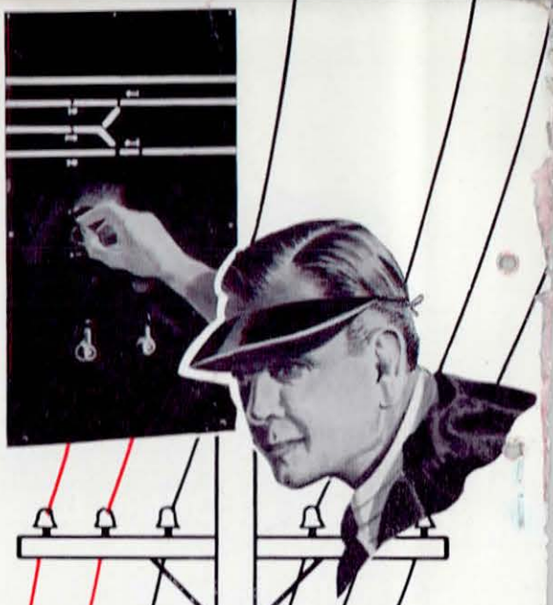

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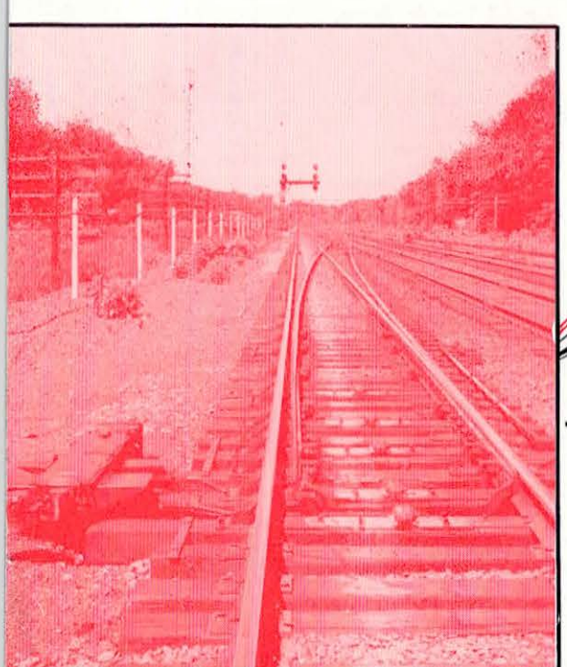

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